# An Address

ON

# SOME EXPERIENCES OF INTRACRANIAL SURGERY.

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BY CHARLES A. BALLANCE, M.V.O., M.S. LOND., F.R.C.S. ENG.,

SURGEON TO, AND LECTURER ON SURGERY AT, ST. THOMAS'S HOSPITAL; SURGEON TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, LONDON.

GENTLEMEN,—I propose to bring to your notice this evening some experiences from my own practice and from that of other surgeons illustrating the objects and results of surgical intervention within the skull. The surgery of this region does not differ in any fundamental manner from that of other regions. There is not one surgery of the head, another of the thorax, and another of the abdomen, but one universally applicable scientific surgery. Most abdominal operations are undertaken for the relief of an obstruction or of an infection. It is no new principle of surgery that mechanical obstruction should be removed, or that an infective area should be extirpated or drained; yet the application of these principles to abdominal diseases has only comparatively recently become a matter of current practice. Most intracranial operations are undertaken to relieve pressure or to remove a source of infection. It is no new principle of surgery that injurious pressure upon any organ should be removed nor that exit should be given to infective products; yet so recent is the application of these principles to disease within the skull that probably but a small minority of the profession have had any considerable personal experience of intradural operations, whereas few in active practice pass many weeks without having to decide as to the necessity or otherwise of opening the abdomen.

Within the skull, as within the abdomen, the diseased area has first to be exposed and the condition then dealt with according to surgical principles. Enucleation or ablation of the whole disease is the treatment of choice, but is by no means always practicable. The surgeon has, for example, frequently to be content with relieving pressure on the brain while not able to remove or even discover the cause of it, just as he sometimes has to do an operation which relieves obstruction of the intestine without removing the cause, or in the skull as in the abdomen to drain an abscess without removing the whole infected area.

The diagnosis of intracranial disease is, speaking generally, a far more complex problem than that of intra-abdominal disease, and, moreover, within the skull an exploratory operation cannot be conducted in the same rapid and complete manner and with so little serious risk as in the abdomen. The maxim that diagnosis must precede operation is only true of those diseases the signs, symptoms, and course of which are fully comprehended. When the early clinical manifestations of a disease are ill understood and when danger attends delay the surgeon is content to act upon a provisional diagnosis. Many lives are thus saved and diagnosis becomes perfected. Diagnosis during the last few years has been much improved and the success of operations has markedly increased.

It is still true that we sometimes open the abdomen expecting to find some grave condition and find nothing. For example, some four years ago a man, aged 50 years, was sent to me who had been ill for six months with frequent vomiting, pain in the abdomen, and marked emaciation. Nothing abnormal was found on opening the abdomen but the patient was cured. He gained flesh rapidly and returned to work. He was seen in April last year and was then well. In such cases no adequate cause for the symptoms is found and it is difficult to understand why improvement follows the operation. In the relatively not uncommon cases in which an expected intracranial tumour is not found at operation one definite pathological condition—namely, increased intracranial pressure—is, I believe, always present. This is certainly relieved by the operation.

The most eminent neurologists will occasionally differ as to the localisation of a brain tumour. In the fable, men differed as to the colour of the chameleon and all proved to be right. In one of Edgar Allan Poe's tales of mystery in which two women were murdered, as was some time afterwards discovered by an orang-outang, the police witnesses all differed as to the language heard during the struggle and all proved to be wrong. In the mystery of brain tumour, if observers differ only one can be right and all may be wrong, for there may be no chameleon, no orang-outang at all, no tumour being found either at operation or necropsy.

The more common conditions calling for intracranial intervention are: (1) diseased or displaced bone; (2) effused blood (recent or of old standing); (3) meningeal inflammation; (4) cerebral abscess; (5) epileptiform neuralgia of the fifth nerve; and (6) tumour (including cysts and infective granulomata).

1. *Displaced and diseased bone.*—I shall do no more than mention these conditions. Obviously they should be dealt with before intradural mischief has arisen.

2. *Effused blood.*—The rapid effusion of the blood into the brain from rupture of a diseased blood-vessel has not, so far as I am aware, yet been arrested by an intracranial operation, nor does such an operation seem particularly feasible, but, as I have elsewhere indicated, lumbar puncture would probably, by relieving intracranial pressure, be useful in some cases of apoplexy. The necessity for surgical intervention in extradural hæmorrhage following blows on the head has, however, long been recognised; indeed, operation for this condition was a matter of current practice long before operation for intra-abdominal hæmorrhage. Do we not all remember committing to memory a table contrasting the symptoms of concussion and compression of the brain?

It is less generally known that intradural hæmorrhage following injury, though not giving rise at the time to the classical symptoms of compression, may nevertheless be present in considerable amount and may not be absorbed but become encysted and, like a blood collection in the tunica vaginalis, continue to increase in size, causing slow pressure on the brain. The presence of such an arachnoid hæmatocele explains many of the cases in which a blow on the head or a fall is followed at some distance of time by obscure cerebral symptoms, among which mental disturbance and transitory paralysis are prominent. Richard Bright, Abercrombie, and Prescott Hewitt have described such cases but without reference to the possibility of cure by operation. In one of Prescott Hewitt's cases the patient, a boy, received while batting a blow on the head from a cricket ball. He lived for 15 years, during which time he suffered from intermittent insanity. The symptoms in the last attack were headache, vomiting, and drowsiness. At the necropsy a large arachnoid cyst was found. Bearing in mind that in almost all serious head injuries blood is extravasated into the arachnoid cavity, it may well be that in certain cases of intermittent headache, intermittent paralysis, or intermittent insanity subsequent to head injury, the lesion present is arachnoid hæmatocele, a condition certainly remediable by operation. I have operated upon five such cases, in one of which, already published, a cyst seven by four and a half by one and a half inches was successfully removed. In another case which I will now relate a mass of old blood clot was removed from the surface of the cerebellum 20 years after the injury. The symptoms were completely relieved. The patient, a single woman, aged 50 years, was seen in September, 1906. 20 years previously she had had a severe shock accompanied by grave physical injury owing to the collapse of a wall beside which she was standing. The neck of the left femur had been fractured and she certainly had sustained some superficial injuries to the head, but it is not clear from the history whether she had fractured the skull or not. She made a good recovery from the accident but with considerable shortening of the limb and some general nervous disturbance. For about twelve months before she came under my observation she had felt giddy from time to time and also had had pain in the back of the head, extending down the neck; both the vertigo and pain were increasing in severity. There was some tenderness on deep pressure in the left occipital region but no deformity of the skull. The hearing was slightly impaired on the left side; with this exception there was no affection of any cranial nerve. There was no ear disease. The edges of both discs were indistinct but no swelling or hæmorrhages could be seen. Sensation was normal, there was no loss of power in any limb, and the gait was normal except in so far as it was embarrassed by the deformity of the left

lower limb. The left patellar reflex was rather more brisk than the right. The patient was of fair complexion, thin, and in poor general health. She was sent to a seaside nursing home for a month, took iodide of potassium with bromide, and was massaged daily; her general condition improved a little but the symptoms were in no way relieved; when she returned there was decided optic neuritis with swelling measuring 2 D. No other fresh symptoms were detected. Localised tenderness, persistent pain, vertigo, and increasing optic neuritis led me to advise operation.

On Nov. 11th, 1906, bone was removed over the left cerebellar region. The bone was thick and dense but no evidence of fracture was observed. The dura mater was under moderate tension, a flap was cut and thrown down forthwith, exposing the surface of the cerebellum, on which was seen a soft brown mass apparently the remains of old blood extravasation and false membranes; this was picked off with forceps. An incision was made into the cerebellar hemisphere but nothing abnormal was detected thereby. The shock attending the operation was severe but the patient soon rallied. The wound healed readily except the upper posterior angle through which cerebro-spinal fluid discharged in considerable quantity for several weeks. The patient continued to suffer from headache after the operation and had neuralgia of the fifth nerve on the homo-lateral side but the vertigo was immediately relieved and did not recur. Convalescence was slow and was interrupted by a somewhat protracted period of mental disturbance with sleeplessness and delusions. It was not until March, 1907, four months after the operation, that the mental state became normal. The flap after healing of the wound remained convex and was at times very tense, but the wound was not reopened. In April she was sufficiently recovered to be sent to the seaside where she remained until August. On her return she was in excellent general health, had gained considerably in weight, had no pain or giddiness, and slept well at nights. There was no optic neuritis. The scalp flap was but slightly convex. She has now (September, 1907) resumed her duties.

Intradural hæmorrhage not infrequently occurs in the newborn from pressure on the skull during delivery; it is a common cause of post-natal asphyxia. Harvey Cushing has called attention to such hæmorrhages with which he has successfully dealt by surgical operation. Cushing says that these extravasations are usually unilateral and that the most prominent symptoms are a bulging fontanelle without pulsation, convulsions, unilateral palsy, a stabile pupil on the side of the hæmorrhage, irregular respiration, slow pulse, fever, inability to take nourishment, and frequently death. In non-fatal cases cerebral palsies, epilepsy, and other nervous disorders may result. Such hæmorrhages must be by no means infrequent in this country and it remains for those in charge of such cases to save life by operation.

3. *Meningeal inflammation.*—The forms of meningeal inflammation with which the surgeon may be called upon to deal are (*a*) meningitis serosa; (*b*) localised or diffused suppurative meningitis; and (*c*) tuberculous meningitis.

(*a*) The condition known as meningitis serosa has received much attention from recent writers and is fully discussed by Körner in the third edition of his work on the "Diseases of the Brain, the Meninges, and the Venous Sinuses of Otitic Origin." By the term meningitis serosa is meant an accumulation of fluid, as an acute or subacute condition, in the subdural space, the subarachnoid space, and in the ventricles. The intracranial serous membranes, just like the others, are excited to hypersecretion by toxins brought to them by the circulating blood, as in fevers, or by their falling within the sphere of toxic influence exerted directly by an infective focus upon the immediately surrounding area. Körner says:—

> It is obvious enough that hydrocephalus interna may result from this sero-toxic inflammation of the meninges, obstruction of the exits from the ventricles apparently being an important element in its causation. Rather more interesting is the extension of the toxic inflammation to the brain itself. Ordinarily the disease is diffuse. For example, the two cases published by Billroth should be regarded as toxic meningo-encephalitis resulting from wound infection. Accumulation of fluid in the arachnoid spaces may be prevented by increase in the intracranial pressure due to hydrocephalus interna or to increase in the volume of the brain from œdema. In such cases the only macroscopic evidence of inflammation which is to be found in the meninges is hyperæmia. But notwithstanding this the meninges must be regarded as primarily, and the brain as secondarily, affected. There is no ground for making a sharp distinction between meningitis serosa on the one hand and hyperæmia of the meninges and brain on the other. The toxic encephalitis does not necessarily extend equally over the whole surface of the brain: it may be more or less completely restricted to that particular portion of the brain which lies nearest to the focus of suppuration, the source of the toxin. In middle-ear disease this is either the cerebellum or the temporo-sphenoidal lobe of the cerebrum. From my own experience I think it is scarcely to be doubted that a localised non-suppurative inflammation of the cerebellum does occur. Distinctive focal symptoms are wanting in proof of this, for such cases very rarely come to the post-mortem room at that particular stage. It is otherwise when the temporo-sphenoidal lobe, particularly the left, is affected. Here we have in the paralysis, and above all in the characteristic speech affections, symptoms which, as in otitic temporo-sphenoidal abscess, point strongly to a deep-seated lesion of this region of the brain. I believe that in such cases there is a diffused sero-toxic meningitis spreading over the cortex that gives rise to the pressure symptoms, the spasms, and the sensation perversions, and a sero-toxic encephalitis affecting the left temporo-sphenoidal lobe which determines the right hemiplegia and the speech affections.

Körner further points out that serous meningitis is most frequent during youth and early adult life, 75 per cent. of the cases occurring in patients under 25 years of age, and 45 per cent. from the tenth to the fifteenth year. Another remarkable fact is that that the signs of meningo-encephalitis serosa often occur for the first time after operation. The symptoms are those of increased intracranial tension and cerebral irritation often accompanied by more or less decided evidence of lesion of some particular part of the brain.

Also nothing certain can yet be said as to the diagnosis. In none of the cases which really or apparently were cured by operation was the disease diagnosed before intracranial exploration; it was never the course but always the subsidence of the disease which led to the case being included in the statistics of meningo-encephalitis serosa. Neither can we yet give precise directions for treatment. The cases considered to be meningo-encephalitis serosa which recover spontaneously, and those which recover after incision in the brain and membranes through which cerebro-spinal fluid has not escaped, show that the disease is frequently enough cured by removal of the temporal bone suppuration alone. This, like many another experience, should warn us that when uncertain about the nature and seat of an intracranial complication we should at first deal only with the causative disease in the temporal bone, middle ear, or labyrinth, and stop at the dura unless we find disease leading deeper.

If the local inflammation is very acute there may be a local encephalitis serosa which yields to incision like inflammatory œdema of a limb. Such cases with focal symptoms must mean that the meninges have become adherent and thus they may and have been mistaken for cerebral abscess. I have had many opportunities of observing that clear fluid collects in the subdural cavity when the dura mater becomes inflamed by the presence external to it of pus. This is what we should expect. Elsewhere—e.g., in the areolar tissue of a limb—an inflammatory focus is always surrounded by a zone of tissue, tense and sodden with serum, and, indeed, before the pus becomes visible the site of the coming abscess is the site of serous effusion or œdema. The same sequence of events occurs in the cerebral meninges. In the subdural space, which is not divided into compartments, a pond of fluid will form, while in the subarachnoid space of the cortex the tissue in normal circumstances being traversed by countless rivulets of fluid (like marshy ground) will become œdematous and swollen.

The symptoms induced by meningitis serosa are fever, a slow pulse, vomiting, and drowsiness. All these may be relieved by lumbar puncture and in some cases no doubt a meningitis serosa may thus be prevented from becoming a meningitis purulenta, just as a pleuritis serosa may sometimes be prevented by aspiration from becoming an empyema.

Hydrocephalus interna is met with in infants as a congenital condition or as the result of the so-called posterior basal meningitis; the congenital form has resulted from intra-uterine meningitis. Of the various methods which have been employed in the treatment of hydrocephalus interna two only seem to have been at all successful. 1. Intradural drainage which allows the fluid to escape into the subdural space, whence unless in too great an amount it is able to pass away through the Pacchionian bodies into the venous system. 2. Ligature of both carotids arresting secretion from the choroid plexus. I have had successful cases by both these methods.

(*b*) Local meningeal suppurations (really localised meningo-encephalitis) occur after injury, sometimes as a result of bone disease and as a localisation of the specific infective disease already referred to—the so-called posterior basal meningitis of infants. Local suppurations can obviously be relieved by operation but the surgical treatment of general suppurative meningitis is a far more difficult task.

With regard to diffused suppurative meningitis. The indications for treatment are to suppress the source of infection, to give free exit to the suppurative exudation, and to combat the disease with the appropriate antitoxin. Some remarkable and encouraging results of surgical intervention

in this desperate disease have been already published. Kümmel relates the following case:—

A man, aged 33 years, fell striking his occiput. For two days he felt pretty well, then had gradually increasing headache, especially occipital, and vertigo, together with tinnitus and deafness in the right ear. There had been a watery discharge from the nose the day after the accident. On the sixth day he was admitted to hospital as the symptoms had increased in severity. He was then still able to walk; he complained of frontal and occipital headache. No paralysis or eye-changes were observed. There was right-sided deafness, but no visible lesion of tympanic membrane. Cerebro-spinal fluid was discharged through the nose. On the third day after admission he became torpid and his temperature rose to 104° F.; next day there was complete unconsciousness, with marked rigidity of the neck and squint. Lumbar puncture let out 20 cubic centimetres of purulent fluid under pressure of 235 millimetres of mercury. He was profoundly unconscious all the day, the lumbar puncture gave no relief, and urine was passed under him. On the following day (the fifth after admission) he was apparently moribund.

Operation was proceeded with as a forlorn hope. An opening as large as a five-shilling piece was made in the bone on each side of the middle line low down in the occipital region. The dura mater was found to be under pressure and was excised over the whole extent of the opening in the bone. The arachnoid was deeply congested, but only a small quantity of sero-purulent fluid escaped. Large plugs of gauze were inserted in the openings as deeply as possible into the posterior fossa and the skin flap was sutured after providing for drainage. The patient gradually improved and in six weeks was discharged well.

Hinsberg refers to this and other cases in a paper published last year. It is probable that in this case the subarachnoid space was opened, but it is not clear from the description given that this was done as a deliberate measure. Hinsberg says that up to the present at least ten cases of recovery from meningitis after drainage of the subarachnoid space are known and five in which decided improvement occurred.

Suppurative meningitis may, as we have seen, chiefly or wholly affect either the subdural or the subarachnoid cavity. When on opening the subdural space we meet with a sheet of pus we have no ready means of ascertaining how far it extends, and it is difficult or impossible to remove the pus by irrigating from one opening to another. Continuous irrigation is conceivable, but cleansing by wiping is impossible unless bone is removed to the full extent of the pus sheet.

In general suppurative meningitis the operation affording the best chance of success is one which provides a free bilateral opening and allows the escape of pus from the subarachnoid space. It has been, moreover, rightly suggested that the spinal theca should be opened in the lumbar region so as to permit irrigation from the cranial to the spinal cavity.

(*c*) I have published a case of tuberculous meningitis in which the removal of tuberculous disease of the temporal bone cured commencing infection of the meninges, as evidenced by headache, vomiting, and squint. The removal of local cranial disease in such circumstances is an obvious duty. Have we anything to hope from an intracranial operation when tuberculous meningitis is not due to local cranial disease? The results of opening the abdomen in tuberculous peritonitis have led to the hope that something would be accomplished by opening the skull in cases of tuberculous meningitis, but the few efforts that have been made in that direction have afforded but little encouragement. Must we accept the results hitherto obtained as final, and conclude that no benefit is to be derived from intervention? Before accepting defeat we should consider whether the measures hitherto adopted are those most likely to prove successful. In operating for tuberculous peritonitis we neither remove the disease nor the source of infection, and it is by no means clear in what way the modification in the evolution of the disease is brought about, but it certainly seems that exposure of the disease and drainage of the inflammatory exudation must be the main factors. The operation is simple and easy of execution.

A problem of much greater complexity confronts the surgeon who seeks to deal with tuberculous meningitis in the same way. Some of the operations hitherto performed have been limited to opening the subdural space; consequently direct access to the disease and direct drainage have not been obtained, the subarachnoid space where the disease lies being left untouched. This procedure is merely opening a neighbouring cavity; opening the pleura could have little influence on disease in the pericardium. Until more complete operations have been performed in an earlier stage of the disease we cannot say whether tuberculous meningitis is likely to be modified in the same favourable way by operation as is tuberculous peritonitis.

4. *Abscess of the brain.*—It is now generally recognised that an abscess in the brain should be treated like an abscess elsewhere. In most cases of slowly spreading infection from chronic disease adhesions occur at the site of infection, binding together dura mater, arachnoid, pia mater, and cortex. The lymphatic sheaths of the numerous small blood-vessels which traverse the cortex at right angles to its surface are in direct communication with the subarachnoid space and through these, as through a number of capillary tubes, infective matter easily traverses the cortex and reaches the white substance within. The cortex is very vascular, and its connective-tissue element, reinforced by numerous prolongations from the pia mater, is abundantly supplied with connective tissue corpuscles. Hence it is able to offer a strenuous resistance to the bacterial attack and does not ordinarily undergo any extensive destruction. Where it is traversed by the infective material a barrier of fibrous tissue is thrown out, limiting the destructive process to the formation of a narrow track. The white substance is much less resistant, and it would seem that the greater the distance from the cortex the more easily does bacterial action cause dissolution of brain substance. Thus, the abscess comes to assume a mushroom-like shape, with the narrow portion or stalk attached to the dura mater at the original site of infection from the bone. Preysing's figures admirably illustrate this important fact and his paper gives us an example of valuable suggestions for treatment obtained by carefully conducted anatomical dissection, for the stalk is the track through which the infection entered. Its lumen presents a ready-made channel with fibrous walls through which drainage can be effected and the infective material made to leave the brain. This natural tube is not liable to be obstructed by the flowing together of the liquid substance of the brain by which the efficiency of all forms of artificial drainage tube is so much impaired. If then the abscess can be tapped through the stalk itself without passing the knife through healthy cortex and meninges there would be efficient drainage without risk of suppurative meningitis or of hernia cerebri. I have found this plan of drainage through the stalk the most successful.

It is hardly necessary to observe that an encapsuled abscess should not be opened and drained but enucleated.

[Mr. Ballance proceeded to narrate some cases illustrative of these last remarks. He continued:]

5. *Epileptiform neuralgia of the fifth nerve.*—I will now call your attention to a patient, aged 94 years, whom I saw in the clinic of Dr. Cushing at the Johns Hopkins Hospital last year. [Mr. Ballance showed a photograph of this patient.] For 15 years he had suffered the most terrible agony of pain in all three divisions of the fifth nerve. The removal of the Gasserian ganglion was successfully carried out without causing paralysis of the frontalis on the side of the operation—a point upon which Dr. Cushing rightly insists. Unless the first division of the fifth nerve is involved the ganglion should not be exposed and removed, nor the trunk of the nerve divided behind it. Intracranial division of the second and third divisions of the fifth nerve is the operation of choice and there does not seem any advantage in combining with this operation the removal of the lower or outer half of the ganglion. Abbé of New York completes this operation by filling the foramen rotundum and the foramen ovale with rubber made soft by heat. I have done the same thing by filling these foramina with gold leaf. Dr. Abbé told me that in two or three cases there had been return of pain at the end of five years and on reopening the wound he had found a few fine filaments of nerve joining (notwithstanding the rubber block in the foramina) the divided ends of the nerves. These were divided with complete relief from pain. I have had one similar experience four and a half years after dividing the second and third divisions of the fifth nerve within the skull and closing the foramina with gold leaf. In this case, as in Abbé's, fine filaments of nerve had formed a new connexion in spite of the gold leaf. Complete relief was afforded by dividing them. Intracranial division of these branches of the fifth nerve is so simple an operation, devoid of the risk of hæmorrhage, of opening the intradural space, and of anæsthesia of the cornea, that even if in all cases the pain returned after five years I should prefer this operation to removal of the ganglion, for it can with great ease be repeated. Return of pain has resulted from imperfect closure of the foramina and we must seek for some more effectual method of doing this than rubber or gold leaf affords.

6. *Tumour of the brain.*—The surgery of tumour of the

brain has not yet reached so satisfactory a stage as has that of most tumours within the abdomen though much progress has been made in recent years. One of the most recently published series of operations for cerebral tumour is that given in a work which appeared this year by Professor Oppenheim of Berlin. He relates details of 14 cases of intracranial tumour all of which came under his observation within the last three years and in all of which an operation was done. Only two were completely successful, one recovered with partial paralysis and the rest died, two of them before the second stage of the operation had been carried out. In one case the tumour was missed at the operation but was found at the necropsy just beneath the operation area. The series is remarkable for precision of diagnosis rather than for striking success in treatment. The author in his concluding remarks says, "The surgical treatment of tumour of the brain is, in spite of a few brilliant successes, still one of the most difficult and thankless tasks of surgical practice." With this view I do not feel in complete agreement; neither the difficulty nor the thanklessness is always present. In the two completely successful cases in Professor Oppenheim's series—a cholesteatoma vera on the dura mater and a meningeal fibro-sarcoma, both well-limited and quite superficial—no considerable surgical difficulty had to be overcome. It is true that when we find a malignant solid or cystic tumour in the brain we cannot deal with it as we do with a carcinoma of the breast, by wide excision. But who would consider a thankless task a decompressive operation which in many cases entirely relieves the patient of agonising headache and distressing vomiting and saves his sight, the rather would the surgeon class such opportunities among his most useful work.

There will be no time this evening to discuss the details and methods of the operations which we now carry out for the relief of cerebral tumour. These are: (1) removal of localised tumours; (2) partial removal of tumours, from which a temporary or lasting benefit is sometimes obtained; (3) drainage of malignant and simple cysts; and (4) decompressive operations.

The essential cause of neoplasms, both benign and malignant, has hitherto escaped observation, and we still have no other means of removing them than surgical operation. In easily accessible situations this measure is readily carried out and even in malignant growths is successful if carried out early and thoroughly. The successful removal of a malignant tumour often requires the sacrifice of much of the surrounding healthy tissue or even of the entire organ in which it happens to be situated, conditions quite unattainable in dealing with malignant disease of the brain. In external tumours it is the growth itself which attracts attention and the surgeon is able to ascertain by direct physical examination many important details respecting it; in many abdominal tumours the information available before operation is scarcely less complete, but in cases of intracranial tumour the very presence of the growth is a matter of inference from symptoms most of which are only to be elicited by careful examination of the patient. These symptoms may be classified as: (1) certain vague symptoms, the evidence of disturbance of the normal harmonious and correlated functional activity of the various parts of the brain, such as change of disposition or impairment of mental power; (2) the symptoms of increased intracranial pressure, headache, vomiting, optic neuritis, slow pulse, and torpor; and (3) symptoms due to irritation or paralysis of particular nerve centres, or groups of nerve centres, the so-called focal symptoms, such as paralysis and disturbances of sensation. All these symptoms and almost any combination of them may arise from causes other than tumour and cases are not uncommon in which on opening the skull the expected tumour has not been found. In some such cases the tumour has been found at the post-mortem examination sufficiently soon afterwards to make it plain that the growth was present but not found at the time of operation either through an error in localisation or through the exploration not having been carried to a sufficient depth beneath the cortex, or through the tumour so closely resembling brain substance as to be mistaken for it. In a few the tumour has been found after a considerable interval of time at a subsequent operation. These, like the others, may be instances of failure to find what was present or it may well be that at the time of the first operation the growth has not attained a sufficient size to be recognisable, as in Sanger's cases of microscopic malignant growths in the brain.

In 1904 I explored the right cerebellar region of a man, aged 20 years, who had symptoms pointing to the existence of a tumour in that region; no growth either without or within the cerebellar hemisphere was found, but the symptoms were relieved and the patient apparently recovered. Two years after the operation he was so well that he could play two rounds of golf without fatigue and the operation scalp flap was flat and not bulging. This year, however, slight optic neuritis recurred and the scalp flap greatly bulged. During my illness Sir Victor Horsley kindly operated and found a cystic growth but a fatal result ensued.

[Mr. Ballance then quoted a somewhat similar case included in Oppenheim's series.]

Besides such cases as these in which a tumour sought for but not found at an operation has been discovered at the necropsy or at a second operation there are others in which complete and lasting recovery from the symptoms has followed an operation at which no tumour has been found; cases which have entirely recovered without operation; and cases which have died and no tumour has been found on post-mortem examination. I have elsewhere quoted the observations of Nonne on this matter. Not only do we sometimes fail to find a tumour in the brain when the symptoms have seemed to point conclusively to its presence, but we sometimes find at a necropsy a tumour when none had been expected, or we find a large tumour which must evidently have been present long before the date of the first observed symptoms. In recent years increase of knowledge has led to greater precision in diagnosis and to a nearer approach to scientific certainty and exactitude in operating.

[Mr. Ballance here described a recent case, instancing a large malignant cyst without the general symptoms of intracranial pressure, and he concluded:]

In some cases the diagnosis and localisation are assisted by x ray photography, and in the future much more will probably come of this method of examination. My address has been a somewhat discursive and fragmentary presentment of a subject important at the present time and full of promise in the future. Some few departments of human inquiry have still their depths and difficulties but these need not deter us from using to the full our present knowledge for the relief of cerebral disease and of gleaning new facts for improving our diagnosis and adding to the resources of our art.

## A NOTE ON GASTRIC ECCHYMOSIS, GASTROSTAXIS, AND SIMPLE GASTRIC ULCER:

### THEIR POSSIBLE RELATIONS TO HÆMORRHAGINS AND MUCOLYSINS.

BY E. C. HORT, M.R.C.P. EDIN.

THE term "simple gastric ulcer" requires no definition nor does "gastric ecchymosis," beyond that of extravasation of blood into gastric mucosa; but the term "gastrostaxis" demands some notice because there seems to be some misconception as to its proper use. Sir E. C. Perry and Dr. W. Hale White have suggested that the term should be applied to a disease hitherto unnamed. Herringham, Lejars, Bertrand Dawson, Hale White, Mayo Robson, and others are its discoverers, in that they have called attention to an oozing of blood from gastric mucosa which is not obviously related to, or accompanied by, ulceration. But the word is not suitable because, though it accurately describes the phenomenon, it only labels a symptom. For oozing of blood from gastric mucosa occurs in very many diseases; so also do epistaxis and enterostaxis besides other forms of viscerostaxis. Its prototype, "epistaxis," is an unfortunate one, because by custom that term includes all kinds of hæmorrhage from nasal mucosa, from a gentle capillary ooze to a violent arterial spirt. So it is clear (1) that if there is a new disease characterised only by gastric oozing without ulceration a new name must be found for it; and (2) that the term "gastrostaxis" is only applicable as that of a symptom that is common to many diseases.

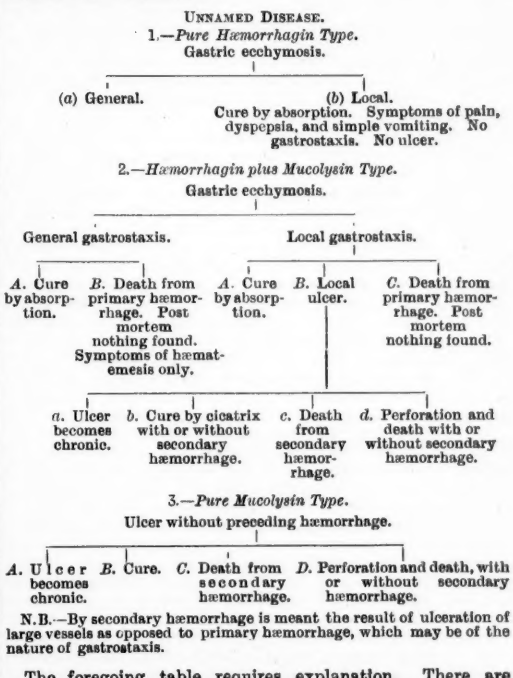
The many conflicting views at present held as to the pathogeny, and possible relations of, gastric ecchymosis, gastrostaxis, and gastric ulcer may be thus epitomised. 1. Gastric ecchymosis and gastrostaxis are in no way related to each other or to gastric ulcer. 2. The cause of gastrostaxis without ulceration is quite unguessed at, the cause

of ecchymosis being equally obscure. 3. The occurrence of gastric ulcer depends on a breakdown of normal immunity of mucosa against autodigestion through destruction of antipeptic bodies caused by thrombosis, embolism, necrosis, or what not. This, Weinland's theory, endows gastric mucosa with fixed antipepsin, which is supposed normally to immunise gastric epithelium against digestion. 4. Autodigestion plays no part whatever in the production of ulcer (Ball).

Before dealing with these views it may be useful to consider under what conditions, other than simple ulcer, and apart from this unnamed disease characterised by gastrostaxis, there may occur (1) extravasation of blood into, (2) oozings of blood from, (3) ulceration of mucous membranes—gastric, intestinal, &c. Leakages from capillary angeiomata and from the lesions produced by trauma of all kinds, and from venous stasis, sclerosis, and hepatic cirrhosis are purposely excluded. 1. Ecchymosis into mucous membranes, gastric and other, may occur in (*a*) the blood group of diseases—purpura, hæmophilia, &c.; (*b*) infective endocarditis; (*c*) lobar pneumonia; (*d*) acute peritonitis; (*e*) tubercle and cancer; (*f*) septicæmia and pyæmia; (*g*) the toxæmias of certain poisons, such as carbon monoxide, and coal-gas; or (*h*) early post-mortem changes. 2. Capillary hæmorrhages from mucous membranes, such as epistaxis, gastrostaxis, enterostaxis, &c., may occur in (*a*) the blood group—hæmophilia, purpura, and especially purpura hæmorrhagica, leucocythæmia, scurvy, and pernicious anæmia; (*b*) septicæmia and pyæmia; (*c*) tubercle; (*d*) some of the infective fevers, particularly pneumonia, typhoid, and yellow fever; (*e*) malaria; (*f*) sarcomata and some of the bleeding carcinomata, especially of the uterus; (*g*) acute yellow atrophy and some of the jaundices; (*h*) the toxæmias produced by drugs such as phosphorus and the venenes of certain snakes; (*i*) rare cases of urticaria accompanied by hæmatemesis; or (*j*) after severe abdominal operations. 3. Gastric and intestinal ulceration may occur in (*a*) septicæmia and pyæmia; (*b*) tubercle and syphilis; (*c*) typhoid fever and dysentery; (*d*) scurvy and malaria; (*e*) uræmia of chronic Bright's disease; (*f*) toxæmia from burns; or (*g*) acute gastritis and colitis. The common incidence in so many of these diseases, of ecchymosis, capillary oozing, and ulceration is very striking. By far the most predominant feature is a toxæmia, in many cases by no means theoretical. In connexion with capillary hæmorrhages into and from mucous membranes and other tissues certain work on the venenes of snakes is of great interest. Flexner, Noguchi, Weir Mitchell, and others have shown that local and general hæmorrhages may follow the bites of certain snakes, especially of the viperines, colubrines, and crotalines. Weir Mitchell, by studying on the warm stage the mesentery of a warm-blooded animal, noticed the following phenomenon. On the application of crotalus venom, the endothelial cells of those capillaries that were affected were almost instantly dissolved. This solution was immediately followed by extravasation of blood, unpreceded by diapedesis of white blood corpuscles. The venene employed was, in fact, cytolytic and, to capillary walls, endotheliolytic. Moreover, Calmette, Sewell, Fraser, and others have been able to demonstrate the action of antivenenes which in this connexion were sometimes found to be anti-endotheliolytic. The endotheliolytic and anti-endotheliolytic toxin and antitoxin were aptly named by Flexner "hæmorrhagin" and "antihæmorrhagin." In connexion with the formation of antihæmorrhagins it was found that if crotalus poison was treated with a 0·2 per cent. solution of hydrochloric acid diminution of activity of hæmorrhagin was produced. That this diminution was due to the toxoid formation of an antihæmorrhagin was shown by the fact that an anti-serum could be thus prepared. It was further shown that in many venoms plurality of cytolysins existed, of the nature of immune bodies, and able by reason of the presence of complements in the serum experimented with to exert their specific destructive effect. So that hæmolysins, neurolysins, leucolysins, &c., produced other cytolytic phenomena in addition to that manifested by hæmorrhagins.

Again, Bolton has shown that if macerated gastric mucosa from guinea-pigs be injected into rabbits the latter's serum can be shown to have certain properties. For, if fresh guinea-pigs be injected with rabbit's serum so obtained their serum will be cytolytic to their own gastric mucosa, producing ulceration. Here, apparently, by the injection of macerated mucosa there is produced in the serum of rabbits a substance of the nature of an immune body which, while protective to the rabbit, is cytolytic to the mucosa of the guinea-pig. Again, injection of pure cultivations of streptococcus pyogenes aureus and of bacillus coli communis will produce in dogs characteristic ulceration of the stomach.

Weinland once more has postulated the existence of fixed antipeptic and antitryptic bodies antagonistic to peptic and tryptic bodies supposed to reside normally in gastric and pancreatic secretions. In the light of this and similar work I hope to be able to show, by presenting a broader conception of the pathology of the phenomena than is generally accepted, that it is not impossible (1) that some forms of gastric ecchymosis, gastrostaxis, and gastric ulcer are but local expressions of a general blood disease hitherto unrecognised; (2) that ecchymosis may be intimately associated with gastrostaxis and that both may be associated with ulcer; (3) that as a symptom of an unnamed general blood dyscrasia ulcer may also occur without preceding ecchymosis or gastrostaxis; and (4) that (*a*) ecchymosis and gastrostaxis are due to the presence in the blood of endotheliolytic and mucolytic bodies, and (*b*) gastric ulcer itself is due to the presence in the blood of floating hæmorrhagins, mucolysins, and other cytolysins, affecting gastric mucosa through one of two channels—either from lymph stream constantly flooding epithelial cells with the specific toxins (mucolysins) or from escaped blood charged with the same bodies (hæmorrhagins, mucolysins). The suggested course of events, or of alternative events, may be for the sake of clearness thus tabulated:—


UNNAMED DISEASE.
1.—Pure Hæmorrhagin Type.
Gastric ecchymosis.
(a) General.
(b) Local.
Cure by absorption. Symptoms of pain, dyspepsia, and simple vomiting. No gastrostaxis. No ulcer.
2.—Hæmorrhagin plus Mucolysin Type.
Gastric ecchymosis.
General gastrostaxis.
Local gastrostaxis.
A. Cure by absorption.
B. Death from primary hæmorrhage. Post mortem nothing found. Symptoms of hæmatemesis only.
A. Cure by absorption.
B. Local ulcer.
C. Death from primary hæmorrhage. Post mortem nothing found.
a. Ulcer becomes chronic.
b. Cure by cicatrix with or without secondary hæmorrhage.
c. Death from secondary hæmorrhage.
d. Perforation and death with or without secondary hæmorrhage.
3.—Pure Mucolysin Type.
Ulcer without preceding hæmorrhage.
A. Ulcer becomes chronic.
B. Cure.
C. Death from secondary hæmorrhage.
D. Perforation and death, with or without secondary hæmorrhage.

N.B.—By secondary hæmorrhage is meant the result of ulceration of large vessels as opposed to primary hæmorrhage, which may be of the nature of gastrostaxis.

The foregoing table requires explanation. There are clinically four sets of cases requiring elucidation: (1) those of gastrostaxis without ulceration; (2) those of ulceration without gastrostaxis; (3) those of ulceration with hæmorrhage, (*a*) of the gastrostaxis order and (*b*) of the secondary hæmorrhage order; and (4) those of pain and vomiting without apparently either gastrostaxis or ulceration. The theory here advanced presupposes the existence in the blood in such cases of two or more toxins, which may occur either alone—(*a*) of the purely endotheliolytic or hæmorrhagin type, causing ecchymosis only; and (*b*) of the purely epitheliolytic or mucolytic type, causing ulceration only; or together—(*a*) of the hæmorrhagin and mucolysin type, causing first ecchymosis and then gastrostaxis; and (*b*) of the same type but with mucolytic toxins in the majority, with first ecchymosis, then gastrostaxis, and finally ulceration. It is clear that ecchymosis into any mucous membrane can only occur by solution of continuity of vascular endothelium. It is equally clear that gastrostaxis, or oozing of blood from gastric mucosa, cannot occur

without a breach in the continuity of mucous epithelium in addition to that of vascular endothelium. Hence gastrostaxis must always be preceded by ecchymosis. There are several questions in connexion with (*a*) the epitome of the currently accepted pathology of these phenomena given above and (*b*) the sequence of events here suggested that must be considered. 1. What is the relation of hyperacidity so frequently found in association with gastric ulcer? 2. How far are food, especially solid food, bacteria, and gastric movements concerned in the production and continuance of ulcer? 3. How far is the peptic action of gastric secretion concerned in production and maintenance? 4. How far does Weinland's theory of natural immunity of gastric mucosa explain (*a*) protection against autodigestion, and (*b*) the occurrence of ulcer by want of such protection? 5. What is the relation, so often seen, of chlorosis to gastrostaxis and to ulceration? 6. "Gastric ecchymoses are so commonly seen in the post-mortem room that if they have any relationship to gastric ulcer they ought to be found in association." 7. "Gastric erosions, apart from gastric ulcer, are so rare in the post-mortem room, whilst ulcers or traces of ulcer are so common, that there does not seem to be any connexion between the two." 8. Why do some cases of gastric ulcer never have hæmatemesis at all? 9. Why do many cases of gastric pain and vomiting continue for years and yet post mortem no traces of ulcer can be found? 10. Why are perforating cases so seldom preceded by recent severe hæmatemesis? To take these points seriatim.

1, 2, 3, and 4.—Peptic action is generally credited with a large share in the production and maintenance of ulcer. Many, however, believe that it has nothing whatever to do with either. Among these is Sir C. Ball who says: "If autodigestion is the cause of ulcer how can the delicate processes of healing by granulation and epithelialisation go on while gastric glands are still secreting? How is it that many patients get well by rest, rectal feeding, little fluid, and no solid food by the mouth, when we know that gastric juice is often secreted even at the sight or thought of food? Why do properly sutured wounds of the stomach heal so rapidly and well in spite of the fact that the line of suture may be bathed in secretion? Is not the continuance of an ulcer, once established, due to gastric movements and solid food?" These arguments are based upon post-mortem evidence, clinical observation, and surgical experience. Before a satisfactory answer can be given to them Weinland's theory of natural immunity must be dealt with. His view supposes that there are located in gastric epithelium certain antipeptic bodies whose function it is to immunise mucosa against digestion by peptic bodies normally present in gastric secretion. Further, that if mucosa is damaged by trauma, embolism, or what not, such immunity is broken down and ulceration results. If this were, however, the whole truth, ulcer would frequently follow traumatic lesions of such a delicate membrane as gastric mucosa and be very much commoner than it is. But trauma is not often followed by ulcer, and yet ulcer is sufficiently common. Hence, though Weinland's theory may possibly explain the absence of autodigestion of mucosa in normal individuals, to the acceptance of which, however, Ball's argument presents weighty objections, it is not alone sufficient to explain the presence of autodigestion in disease. If the possibility of a plural existence of cytolytic toxins be accepted, not only must mucolysin be present for the destruction of epithelium but, in addition, bodies destructive to muscle and other tissues. It will be seen that if ulcer is only the symptom of a general blood disease depending on the existence of cytolytic toxins we are in a position to explain—1. Why autodigestion does not normally occur. The explanation rests on two factors, the existence of both of which is essential. (*a*) Given Weinland's peptic bodies, which are possibly immune bodies, and given suitable complements, digestion of epithelium might occur if these bodies did not by their joint action produce *in situ* an antipeptic toxoid linking on to complement and leaving peptic body alone unable to affect mucolysis. It will be remembered that in certain snake venenes the action of a 0·2 per cent. solution of hydrochloric acid was the toxoid production of an antihæmorrhagin linking to complement. It is not impossible that this is one of the functions of normal gastric juice. (*b*) The non-existence in the blood of cytolysins of a different order or the existence of a large store of anticytolysins. 2. How production and continuance of ulcer are effected. Given hæmorrhagins, mucolysins, and other cytolytic toxins, elaborated in the blood as a result of the disease in question the explanation is simple. The cytolytic bodies are, in this case, of the nature of immune bodies and either because of an absence of antibody or an excess of immune body they are unable to produce toxoid formation, so their complement remains unlinked and ulceration begins. The often noted association of hyperacidity and ulceration is in this connexion highly suggestive. It is as if, in self-protection, the oxyntic cells are stimulated to excessive secretion of acid and in the attempt at creating a larger toxic formation. A solution is thus offered of some of the clinical problems presented by gastric ulcer. If the dose of immune body in this disease be in excess of the ability of the economy to manufacture, by toxoid formation, antimucolysin, and antihæmorrhagin, or other anticytolysins, the progressive nature of an ulcer will depend on the absence of immunity production. Hence unsuitable food and gastric movements will be recognised as only subsidiary factors. If the dose is smaller or the response to the demand for the production of immunity readier we can at once see why some cases get perfectly well by rest, &c. For the delicate processes of repair will go on in spite of gastric secretion, which in any case, according to this view, has no digestive effect on gastric mucosa, though it may interfere with healing. Wounds of the stomach, other than those made for excision of ulcers, will heal readily enough in the absence of blood-carried cytolysins. The explanation of the hæmorrhagic type of ulcer is precisely similar and the occurrence of the phenomena will be rendered easier by the fact that epithelium would be bathed in extravasated blood and various kinds of cytolysins thereby set free.

5. What is the relation, so often seen, of chlorosis to gastrostaxis and to ulceration? If it be true that gastrostaxis and ulceration are due to the presence in the blood of toxins which are cytolytic to vascular endothelium and to mucous epithelium an answer to this question at once suggests itself by putting another, Why should not other cytolytic poisons producing hæmolysis and leucoiysis be present? That both these latter events do take place in chlorosis is strongly suggested by a careful blood examination of chlorotics. The common event is corpuscular paleness without much decrease in number, a marked diminution in hæmoglobin, sometimes marked poikilocytosis, and even leucopenia. That all chlorotics do not get ulcer does not weaken the suggestion of association of cytolytic toxins in cases that do. The established presence of chlorosis is no bar to the conception. Fatty degeneration of capillaries induced thereby will but give their walls an easier prey to endotheliolysis and the same degeneration of mucus epithelium to epitheliolysis. Once the solution of capillary wall by hæmorrhagin and of mucous lining by mucolysin is begun, not only is the way open for gastrostaxis, but a potential ulcer also is in being. Further, its progressive nature will be aided, if not insured, by more mucolysin, food-carried bacteria, and gastric movements.

6. Gastric ecchymoses are so commonly seen in the post-mortem room that if they have any relationship to gastric ulcer they ought to be found in association. Hale White says that of 2246 cadavera examined 172 presented gastric ecchymosis. Of the 172 cases the majority died from complaints that were in no sense gastric. In no one case was any association found between ecchymosis and gastric ulcer. But an ecchymosis into gastric mucosa, as elsewhere, is rapidly absorbed, unless followed by wide destruction of mucous membrane by subsequent hæmorrhage. Unless careful search has been made for evidence of pigment in the mucosa adjacent to an ulcer, or in neighbouring glands, it cannot be said definitely that there has been found no association of the two events. Further, an ulcer, if of any size, may easily have in its growth destroyed any evidence of ecchymosis. Also the ulcer may be of the purely mucolytic type.

7. Gastric erosions, apart from gastric ulcer, are so rare in the post-mortem room, whilst ulcers or traces of ulcer are so relatively common that there does not seem to be any connexion between the two. According to the same authority gastric erosions were found in 16 only of 2246 post-mortem examinations. In seven of the 16 the erosions were apparently due to stasis, for six had valvular disease and one general arterio-sclerosis. The remainder died from malignant disease, abscess, peritonitis, tubercle, and pneumonia, in all of which toxæmia takes a share. So that in these nine cases of erosion, cytolytic toxins, each of their own order, may easily have been at work. The distinction between an erosion of mucous membrane and an ulcer is a very fine one.

So the true value of the argument, that because ulcers are rare in malignant disease, abscess, peritonitis, tubercle, and pneumonia therefore they can have no connexion with the simple ulcers so frequently found, is apparent. That they can have no causative connexion is, of course, clear, but if we postulate the existence of cytolytic toxin or toxins behind both sets of conditions a definite connexion is at once established.

8. Some cases of gastric ulcer never have hæmatemesis at all. It cannot be asserted that there has in any given case been no hæmorrhage, unless both gastric and intestinal contents have been repeatedly examined both microscopically and macroscopically. A large hæmorrhage is not at all necessary for the production of an ulcer. A small hæmorrhage may be, and sometimes is, entirely missed. An analogy may be found in those not infrequent cases of pulmonary tubercle who from first to last show no sign of hæmoptysis. It cannot be entirely because vessels are not involved in direct tuberculous ulceration. There must be some other factor to account for such cases. In these cases, where perhaps there is not even streaking of sputum, it may be that the natural store of antihæmorrhagins is large and that of hæmorrhagins small. In cases of gastric ulcer where precedent hæmorrhage can be absolutely excluded hæmorrhagins may be few and mucolysins many. In such a case ulceration may be initiated by a deposit in mucous epithelium of mucolysins from the lymph stream, as suggested in the scheme under the heading of the purely mucolytic type.

9. Many cases of gastric pain and vomiting (non-hæmorrhagic) continue for years, and yet post mortem no ulcer or traces of ulcer can be found. If the hæmorrhagin theory of ecchymosis be adopted the difficulty at once disappears. That an ecchymosis should be accompanied by pain is only to be expected. The amount of tension would determine the amount of pain and both would depend on the degree of extravasation. Recurring attacks of pain would be explained by recurrent ecchymosis. The absence of hæmorrhage and of ulceration would depend on the absence of mucolysin or of immunity to its action. It is notorious that vomiting may be produced by different kinds of acute pain. Pain produced by the tension of an ecchymosis might easily excite vomiting. Again, it has often been noticed how frequently an attack of gastrostaxis may relieve pain.

10. Perforating cases of ulcer are seldom preceded by recent severe hæmatemesis. If the cytolytic theory be adopted a severe hæmorrhage is not at all likely to be followed by ulcer and perforation because of the draining off of hæmorrhagins and mucolysins caused by the hæmorrhage. Gastric mucosa would, in fact, be more or less free of them. Again, the acute perforating ulcer would be more likely to come under the heading of the purely mucolytic type and be caused in a different way than by the route of ecchymosis and oozing. Here the plural conception of cytolytic toxins goes far towards explaining these acutely progressive cases. In addition to epithelial cells, sub-mucous, muscular, and peritoneal tissue would each fall a victim to their own specific cytolysin.

From these considerations it is clear, if it can be established, (1) that no other theory as yet put forward brings into line such apparently incongruous manifestations as ulcer without hæmorrhage, hæmorrhage without ulcer, perforation without hæmorrhage, &c.; (2) that it is useless to expect to find in the deadhouse conclusive evidence of cause and effect of hæmorrhage and ulcer beyond that of extravasation; (3) that the present-day medical treatment of the conditions must be modified; and (4) that the use of surgery in combating a profound toxæmia must be carefully restricted.

It may well be asked what proof is there (1) that the forms of gastric ecchymosis, gastrostaxis, and gastric or duodenal ulceration here discussed are, individually or collectively, the local expressions of a general blood disease? and (2) that the cause of such disease is the presence in the blood of cytolytic toxins? The evidence I wish to submit is of two kinds. 1. Direct evidence of cytolysis in man in these forms of capillary hæmorrhage into and from gastric mucosa and of ulceration afforded by (*a*) blood examinations and (*b*) the remarkable results of treatment by serum and by vaccines that I have undertaken with the object of producing immunity in such cases against the specific toxins. 2. Collateral evidence of (1) cytolysis in man in other diseases characterised by gastrostaxis or other hæmorrhagic fluxes or other signs of cytolysis, such as hæmolysis, afforded by (*a*) blood examinations and (*b*) the encouraging results of serum and vaccine therapy that others as well as myself have undertaken with a view to the production of immunity in such cases; and (2) cytolysis in the animal kingdom afforded by (*a*) the artificial production of cytolytic phenomena in certain animals and (*b*) the establishment of immunity in such animals by (*c*) the preparation of sera and vaccines. Such evidence will form the subject of a subsequent communication and will embrace the results obtained, hæmatological and clinical, by serum therapy applied to the following conditions: (1) gastrostaxis and duodenostaxis without apparent ulceration; (2) ulcer with or without primary or secondary hæmorrhage; (3) acute gastric pain and vomiting without hæmorrhage, suggesting ecchymosis; (4) chlorosis; (5) pernicious anæmia; (6) purpura, and especially purpura hæmorrhagica; (7) hæmophilia; (8) leucocythæmia; and (9) the incidence of capillary hæmorrhage in (*a*) tubercle and acute lobar pneumonia and (*b*) in certain other conditions.

Torquay.

## THREE CASES OF INTESTINAL OBSTRUCTION.

BY R. D. MOTHERSOLE, M.S., M.D. LOND., F.R.C.S. ENG.,
HONORARY SURGEON TO THE BOLTON INFIRMARY AND DISPENSARY.

CASE 1. *Volvulus of the small intestine.*—The patient, a man, aged 32 years, was admitted to the Bolton Infirmary on April 13th, 1906, with a history of about a fortnight's illness. On April 10th he was seized with abdominal pain and vomiting, becoming gradually worse till the 12th, when the vomit became fæcal. There had been complete constipation since the 9th, not even flatus having been passed. On admission he was evidently in a very serious condition and an immediate operation was decided upon. On opening the abdomen in the middle line below the umbilicus a very distended coil of small intestine was found apparently twisted on itself, but it was so tense that it could not be untwisted without emptying it of its contents. It was therefore incised and a quantity of liquid fæces allowed to escape. It was then found that a loop of small intestine had passed over a band of omentum which was attached to the abdominal wall in the region of the appendix and the loop had become twisted on itself through a complete circle. It could now be readily untwisted and the omental band was divided and removed. It was considered advisable to drain the bowel for a time, so a Paul's tube was tied into the incision already made. The bowel having been carefully cleansed was then returned into the abdomen and the parietal peritoneum was sutured round the neck of the tube just above its exit from the bowel. The recti muscles and skin were also brought together for the greater part of the wound. The tube was allowed to remain in for six days, during which time there was a large escape of green fæcal matter and flatus from it. It was then removed and for some days there was a very copious discharge from the opening, as well as some from the anus with the help of enemata. At first the skin round the wound became very red and raw but by keeping it coated with zinc ointment it soon resumed the normal condition. The opening closed very rapidly and on May 10th only allowed the escape of gas. On the 13th it had quite closed and on the 30th the patient was discharged from the infirmary. Since then he has had good health, except for an attack of indigestion caused by eating new bread.

CASE 2. *Subacute obstruction of bowels probably due to adhesions and kinking.*—The patient, a man, aged 36 years, was admitted to the Bolton Infirmary on July 8th, 1906. His illness began with flatulence and on the following day there was abdominal distension with vomiting of everything taken and no passage of fæces or flatus. On admission, after about a week's illness, the abdomen was much distended and he complained of lancinating pains, mostly round the umbilicus. Shortly after admission he vomited a quantity of fæcal fluid; his temperature was 97° F. and his pulse was 140. Immediate laparotomy was decided upon and an opening was made below the umbilicus. The intestines were found to be very adherent, especially in the direction of the appendix; they were also much distended. From the not very acute onset of the case and the presence of so many adhesions it was considered probable that the case was one of obstruction by kinking, and as the patient's condition was very bad it was

thought that his best chance of recovery would be in enterotomy and draining the bowel. Owing to the numerous adhesions the bowel could not be brought well out of the wound; it was therefore well packed round before incising, and after allowing some fæces to escape a Paul's tube was tied in and the greater part of the wound was closed as in the previous case. For two days after the operation his condition was very critical, the pulse remaining at over 140, but he then began gradually to improve. The tube was left in for seven days. In this case there was much more difficulty in getting the fistula to close, apparently because the bowel was nearer the surface, so that there was much less depth of tissue between the bowel and the skin. The edges of the skin wound had to be cauterised several times with pure zinc chloride to prevent the skin wound from healing over too soon, and the skin above and below the opening had to be brought together with strapping so as to make a gutter at the bottom of which the fistula was situated. The opening was not soundly healed until November and he was discharged on the 21st of that month. When last seen, on Jan. 9th, 1907, he had put on 20 pounds in weight. It is probable that the adhesions which matted the coils of small intestine together and were evidently not of recent origin, were due to a previous attack of appendicitis, though there was no record of such an event in the patient's history.

These two cases show the usefulness of Paul's tubes in the treatment of certain cases of intestinal obstruction. It is practically certain that the second case, and possible that the first one, would not have recovered under any other mode of treatment. It will be noticed that the bowel was not treated in the way usually recommended in the text-books—i.e., it was not sutured to the wound in the abdominal wall. It seems reasonable to suppose that the greater the depth of tissue between the opening in the bowel and the skin the more likely is the fistula to close. It does not seem that there is much, if any, risk of general peritoneal infection if this suturing is omitted, and one avoids the risk of puncturing the mucous membrane with the needle. When the operation is done in the usual way Moynihan says, "Closure of a fæcal fistula performed in the manner described is possible though not frequent." It is very important if possible to avoid having to subject the patient to a second dangerous operation for the cure of his fæcal fistula.

CASE 3. *Intussusception of a Meckel's diverticulum.*—The patient, a boy, aged six years, was admitted to the Bolton Infirmary on Oct. 30th, 1906, with a history of 24 hours' abdominal pain, vomiting, and constipation; he had also passed blood per rectum. On admission there was considerable resistance on the right side of the abdomen, but no tumour could be felt even when the patient was under chloroform. The abdomen was incised an inch to the right of the umbilicus and at the same time some 25 ounces of saline solution were injected into the rectum. No tumour could be felt, but on examining the small intestine a patch of congestion was noticed, and this was found to be at the base of a Meckel's diverticulum. The latter was about four inches long and at its base was as large as the bowel from which it sprang. Its free apex was thickened. It was excised and the bowel was closed by a double row of sutures. On everting the diverticulum the mucous membrane was found to be much thickened and congested, especially at its apex, pointing pretty conclusively to the fact of its having formed the apex of an intussusception. Had the intussusception gone on the case would have been similar to that described by Mr. J. Rutherford Morison in THE LANCET of June 14th, 1902. It is impossible to say whether the reduction was spontaneous or due to antiperistalsis excited by the rectal injection. The patient's recovery was uneventful.

Bolton.

ROYAL INSTITUTION OF GREAT BRITAIN.—A Christmas course of illustrated lectures, adapted to a juvenile auditory, on Astronomy, Old and New, by Sir David Gill, K.C.B., LL.D., D Sc., F.R.S., M.R.I., will be delivered at the Royal Institution, Albemarle-street, on the following dates: Lecture 1, Saturday, Dec. 28th, 1907; Lecture 2, Tuesday, Dec. 31st, 1907; Lecture 3, Thursday, Jan. 2nd, 1908; Lecture 4, Saturday, Jan. 4th, 1908; Lecture 5, Tuesday, Jan. 7th, 1908; and Lecture 6, Thursday, Jan. 9th, 1908. The lectures will begin at 3 o'clock.

# A CASE OF COMPLETE GASTRECTOMY.[1]

BY B. G. A. MOYNIHAN, M.S. LOND., F.R.C.S. ENG.,

HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY.

*With a Pathological Report by* F. CRAVEN MOORE, M.D., M.Sc. Vict., M.R.C P. Lond., *Honorary Physician to the Ancoats Hospital, Manchester; Lecturer on Medicine in the University of Manchester.*

THE following are the notes of a case in which I removed the whole stomach on account of its universal implication in a malignant growth. For the notes and for his care of the patient after operation I am indebted to Mr. E. R. Flint, house surgeon at the Leeds General Infirmary. The pathological investigation and report were most kindly undertaken by Dr. Craven Moore.

The patient, a married man, aged 43 years, who had been under the care of Dr. Peter Macdonald of Acomb, was admitted to the Leeds General Infirmary on May 24th, 1907. He was the father of two healthy children and had always been healthy himself, the only illnesses which he could remember being influenza two or three times and an ischio-rectal abscess some ten years previously to admission. He had always had as his occupation the management of horses and had been in his present situation as coachman for five years. He said that all his relatives, so far as he could remember, had died from "old age." He had been in good health up to two years ago when he gradually began "to go off his food." By this he meant that he did not want his food quite as he had been accustomed to do. He could eat anything but was afraid of the pain which he knew would come on after taking anything. This pain, which was relieved by food for an hour or so, was situated in the epigastrium and continued until he vomited, when it at once subsided until an hour after his next meal. The kind of food taken made no difference to the pain experienced. The vomiting commenced as a profuse gush, and in the vomit he recognised food which he had taken at his last meal. There was never to his knowledge any hæmatemesis. After the first six months he was free for some weeks from pain and vomiting, but at this time he was under medical supervision and was taking liquids chiefly; he had his stomach washed out every other day for two weeks and was away from work for eight weeks. The stomach contents at this time were analysed as there was a suspicion of cancer in the medical attendant's mind; but the analysis gave a normal result. After eight weeks he returned to work still taking fluids and feeling much better, but every now and again he had attacks of vomiting and pain; he noticed that he began to feel the pain at shorter intervals after his food was taken, but he was still relieved by vomiting. All this time he was steadily losing weight, which had fallen from 11 stones 4 pounds to less than 9 stones. He had also noticed that the amount of fluid taken at any one period was much less than formerly, until last Christmas, when the amount was so diminished that he was only able to take three or four mouthfuls at a time before he experienced a feeling of discomfort and vomited. From that time to the time of his admission this diminution in amount continued.

On admission the patient was in fairly good condition, but he looked as though he had been a stouter man at some time, his skin was somewhat loose, his muscles were flabby, and his cheeks were a little hollowed. His weight was 8 stones 2 pounds. When he was given some fluid to drink he merely sipped it a mouthful at a time and had to wait a few seconds (about ten seconds) before the fluid "settled"—he gulped and strained his neck forward as though trying to get the liquid to pass an obstruction. After a few seconds he would appear comfortable and ready for another mouthful. He still vomited occasionally—the vomit was not fermented or sour. He could not take any solid food at all with the exception of cheese, a few "nibbles" of which he enjoyed. He never had any desire for food; in all about from 30 to 40 ounces of fluid were taken daily.

*Abdominal examination.*—The abdomen looked thin and

[1] A paper read before the Section of Surgery of the Royal Society of Medicine on Dec. 10th, 1907.

excavated; its anterior surface receded sharply from the raised costal margin. Palpation revealed nothing abnormal; the walls were rigid and nothing unusual could be felt through them. Two very small doses of tartaric acid and bi-carbonate of sodium were given separately. Instantly some foam gushed out of the mouth. On examining the abdomen a puffy swelling of about the size of a billiard ball was seen and felt in the left upper half of the epigastrium immediately below the costal margin. No other part of the stomach was distended; and the inflated portion was everywhere quite definitely circumscribed. The conclusion reached from this examination was that there was possibly an hour-glass stomach with a very small cardiac complement, and that this was due to the cicatricial contraction of an ulcer on the lesser curvature close to the cardia. A stomach tube was then passed. It went 17 inches quite readily, but not further than that. Only a small quantity of fluid could be introduced. A little over four ounces was the most that could be retained; when this had flowed into the stomach the patient began to complain of pain, great tightness, and oppression, and was obviously greatly distressed. The fluid soon returned clear; on one occasion a little blood was seen. Bile was frequently seen in the washings. At one examination it was found that when a measured quantity of fluid was used for the washing only two-thirds of it was returned through the tube. On two subsequent occasions the stomach was inflated; on one the swelling at the cardiac end was again well seen; on another it could not be demonstrated. The following was the result of an examination of a test-meal. Macroscopic: Food, badly digested; blood. Chemical: Blood; no free hydrochloric acid; no lactic acid. Microscopic: Yeast present; sarcinæ present; bacillus geniculatus present and other organisms numerous; pus abundant.

The diagnosis was made of hour-glass stomach with a very small cardiac complement. Owing to the impossibility of inflating the distal or pyloric part of the stomach reference was made, when the case was demonstrated to the ward-class, to the possibility of its being an example of "leather-bottle" stomach, the "linitis plastica" of Brinton.

Operation was advised and was performed on May 31st in the following manner. The abdomen was opened in the middle line by an incision which at first was about three inches in length, sufficient to allow of exploration, but which was increased subsequently to a length of eight inches. At the outset there was a very serious difficulty in exposing the stomach. The patient was a man who had been stout but who had lost weight rapidly; the anterior abdominal wall therefore shelved downwards from the elevated costal margin in such manner as to make the upper part of the stomach appear to be at great depth from the surface. The patient, moreover, was not at all comfortable under the anæsthetic and I had to wait a long time after opening the abdomen before I could proceed with the operation.

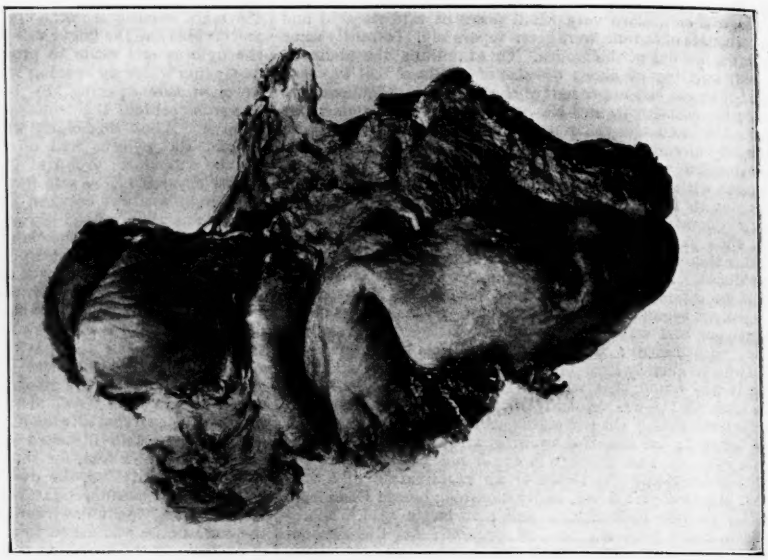
When the stomach was exposed it was seen to be small in size with walls of great thickness and solidity. The whole organ, indeed, felt solid, resembling a very large uterus, having thick walls and an insignificant cavity within it. [This is well shown in the skiagraph subsequently taken.] The surface was smooth, white, and opaque; there were no adhesions and but few obviously enlarged glands along the curvatures. Towards the cardiac end the stomach was larger than elsewhere, so that the organ had something of the shape of a Florence flask; the larger part, however, was still very much smaller than the normal. This being the condition of the stomach it was at once evident that the performance of gastro-enterostomy was impossible, for there was no sufficient cavity in the stomach to admit of any anastomosis being made. The alternative procedures were complete gastrectomy and either jejunostomy or duodenostomy; after some deliberation I decided in favour of the former and I proceeded at once to remove the whole stomach. It was at this point that the abdominal incision was enlarged. Hot moist swabs in two layers were then packed into the abdomen in the usual manner to isolate the field of operation. The stomach was now depressed as far as possible by forcible traction by an assistant and two long clips were applied to the coronary artery at its origin from the cœliac axis. The artery was divided between the clips and its proximal end was ligatured. The upper and lower coronary groups of glands were detached downwards towards the stomach by gauze stripping and the cardiac end of the stomach was denuded by the same means. The gastro-hepatic omentum was divided after ligature as close up to the liver as possible until the upper border of the pylorus was reached. Here, by gauze stripping the pyloric artery and the gastro-duodenal artery were exposed as they separately arose from the main hepatic trunk. The pyloric artery was ligatured and divided and the finger was then passed downwards behind the pylorus and made to present at the lower border of the duodenum where an opening was made in the great omentum. Through this opening the blade of a clamp was passed upwards behind the duodenum to present above the pylorus. When this clamp was closed it lay about one inch beyond the pylorus and on the stomach side of it there lay the subpyloric group of glands. A second clamp with rubber-covered blades was now applied distal to it and the duodenum was cut between them. A single strong catgut suture was then passed through the proximal part of the duodenum and round the clamp to prevent the clamp from slipping away. The distal end of the duodenum was then closed by a continuous catgut suture taking all the coats and by a double layer of Pagenstecher thread suture above this. The clamp holding the proximal part of the duodenum was now covered with a gauze swab and was lifted well towards the left, exposing the gastro-duodenal artery more conspicuously. The artery was ligatured and divided. Along the whole length of the greater curvature the gastro-hepatic omentum was divided at a distance from the stomach of from 1 to 2 inches, so that all glands, including one or two dropped glands, were left attached to the stomach. The whole stomach was now free, for the gastro-hepatic omentum had been entirely divided, the duodenum was severed, and the gastro-colic omentum ligatured and cut free. The whole stomach hung pendulous from the œsophagus. At this point the anæsthetist was asked to flex the patient's neck as much as possible, in the hope that this might enable the œsophagus to be pulled downwards a little more readily, and it seemed that this hope was fulfilled. The œsophagus was dragged upon with a fair degree of force until at least three-quarters of an inch of it was visible below the diaphragm.

The next step, and the most important and difficult of all, was the anastomosis of the œsophagus to the jejunum. The transverse mesocolon was already exposed on its upper surface in the wound; it was divided in an avascular area and the upper loop of the jejunum pulled through it. A point on this about eight inches from the duodenal-jejunal flexure was selected for the anastomosis. A piece of it about two and a half inches in length was laid transversely along a line immediately behind the œsophagus. As it lay there transversely, the right leaf posterior, its upper end was to the left, its lower to the right. The anastomosis was now begun by introducing eight light interrupted sutures between this portion of the jejunum and the œsophagus. The part of the circumference of the jejunum used was that on the surface which was now posterior and on this surface about three-quarters of an inch from the mesenteric attachment. As the sutures were introduced into the œsophagus this was made to present and was well exposed by a forcible and continuous downward traction upon the stomach. The stomach, wrapped in a hot gauze swab, was used, and most efficiently used, as a retractor, or rather as an instrument of traction, upon the slightly dilated œsophagus. The help derived from this manœuvre was far greater than could be believed from a mere description. It converted what would have been an excessively difficult feat into one of comparatively easy accomplishment. Eight interrupted sutures then were introduced until the whole of the posterior half of the œsophagus was securely attached to the jejunum. In front of these a continuous suture was now introduced, exactly as in the operation of gastro-enterostomy from left to right; the needle carrying this suture was then laid aside to be presently resumed. The attachment of the œsophagus to the jejunum seemed now quite secure on this posterior aspect. In front of this continuous suture a small opening was made into the œsophagus and into the jejunum at the extreme left end of this attachment. A continuous through-and-through Pagenstecher thread suture was now began and a few turns of the needle taken until the whole length of the small openings made had been united. These openings were then enlarged little by little from left to right, and as they were enlarged their cut edges were sutured by the same continuous stitch. This sequence of a small incision, a few stitches, slight enlargement of the incision, a few more stitches, was continued until the whole of the posterior part of the œsophagus was divided and sutured to the incision in the jejunum. Around the anterior wall of the œsophagus the same sequence was continued, the stitch

being now changed to the "loop on the mucosa" form.[2] The result was that the stomach was retained as a tractor, drawing down the œsophagus until the last piece was severed, and at that moment the line of anastomosis was almost complete. Finally the outer continuous suture previously laid aside was resumed and continued round the anterior surface of the œsophagus and jejunum to its starting point where it was tied and cut short. The suture line was now complete. There were, it will be seen, eight interrupted posterior sutures, intended as anchor sutures, and the two continuous sutures, as in the usual operation of gastro-enterostomy. A few anterior anchor sutures fixing the jejunum and the œsophagus to the diaphragm were now taken and the main part of the operation was now complete. The great omentum was turned upwards over the operation area and the abdomen closed.

The patient had borne the operation well. There had been no soiling of the operation field nor any exposure of viscera. As soon as the patient was put back to bed the continuous administration of saline fluid by the rectum was commenced.

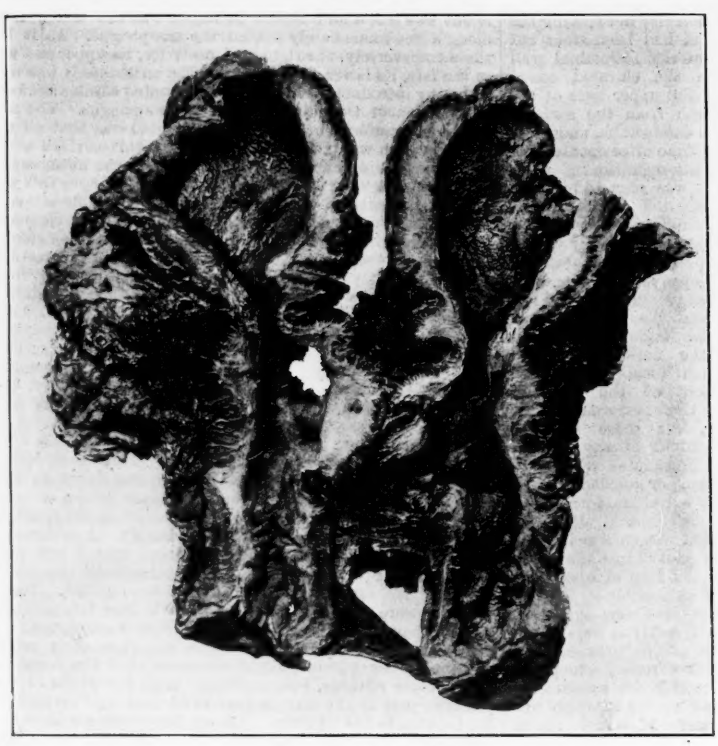
FIG. 1.



View of the stomach from the outside.

In the first 24 hours nine pints were taken; in the second 24 hours six pints. After this it was discontinued. The help given by the absorption of 15 pints of normal saline solution within 48 hours is probably difficult to exaggerate. During this time, contrary to my usual practice, I gave no fluid by the mouth, but the patient was allowed to flush his mouth as often as he wished. He never complained of thirst and did not suffer any great amount of pain. He was kept lying flat on his back, with the head propped well forward. The administration of fluids by the mouth was begun very cautiously on the third day. Two teaspoonfuls of water were given every half-hour; on the fourth day this quantity was increased to two ounces every half hour. On the fifth day five ounces were given hourly; water and peptonised milk and albumin water were given in succession. On the sixth day two pints of these fluids were taken while the day nurse was on duty and one pint six ounces during the night. These quantities of the same fluids were slowly increased until on the tenth day five pints were taken in the 24 hours. On the eleventh day beef-tea and Benger's food were given, on the fourteenth day milk pudding, and on the eighteenth day bread and butter. During the third week the patient told us every day that he was hungry, a sensation which he had not experienced so keenly for two years. At the end of the third week he began to take meals of fair quantity consisting of minced chicken, milk puddings, &c. He was kept in bed for 18 days, and on the twenty-second day

FIG. 2.



The stomach laid open.

[2] See Abdominal Operations, second edition, p. 395.

was sent to a convalescent hospital. On leaving the hospital his weight was 8 stones 12 pounds, a gain of 10 pounds. On August 21st he weighed 10 stones and was able to eat all foods.

This is the second occasion upon which I have been called upon to perform complete gastrectomy.[3] The circumstances present in the two cases were similar; the stomach was small, with thickened walls and a cavity greatly reduced in size; it was invaded in every part by cancer, the glands were only slightly affected, there were few adhesions, no invasion of the parts around by the growth, and no secondary deposits. It has been computed by Fenwick[4] that 14 per cent. of all patients dying from carcinoma of the stomach show no extension of the disease beyond the stomach. The type of cancer in both these patients was atrophic and the malignancy was probably of a low grade. It would seem that conditions of the kind enumerated are essential to the successful carrying out of the operation of complete gastrectomy. In my first case, which proved fatal, I adopted a technique which I thought satisfactory. After the operation I gave much thought to the details of the operation and endeavoured to construct a method which I should carry out if the opportunity again came to me. I had determined to make use of the stomach-tube passed through the œsophagus into the jejunum as a sort of cylinder upon which to suture, and I considered that the fixation (by a catgut suture) of the tube to the cut end of both œsophagus and jejunum (the suture being, of course, buried by the continuous sutures along the line of anastomosis) would help to make the feeding of the patient during the time of healing of the wound a simple and a safe matter. But when I came to perform this second operation I realised as I saw the stomach pendulous from the œsophagus that it might be used with the very greatest advantage to hold the œsophagus in a fixed position until my suture lines were practically complete. I feel sure that this point is one which has solved the greatest of all difficulties in the operation of complete gastrectomy, and it embodies, moreover, a technical principle which is applicable to other operations than this.

FIG. 3.

Skiagram of the stomach filled with bismuth. X and X are placed opposite the cardiac and pyloric constrictions.

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The specimen includes the whole stomach and about a quarter of an inch each of the œsophagus and duodenum. The stomach is greatly diminished in size, its length being four and a quarter inches, and its maximum diameter in the region of the fundus two and a half inches. In form it is tubular, gradually contracting towards the pylorus, and about the middle third it presents several deep transverse folds which it is impossible to obliterate by tension; in consistency it is firm and elastic. Attached to the stomach are portions of the gastro-hepatic and the gastro-colic omenta, and in the former are several lymphatic glands which are firm and of normal size; the omenta themselves appear quite normal. The serous coat of the stomach over the fundus and middle third of the organ appears somewhat thickened and more opaque than normal, and here and there presents small white nodules about a pin's head in size. The wall of the stomach is greatly thickened and indurated, the thickening being greater in the proximal two-thirds of the organ, where it measures half an inch, than in the pyloric portion, where it measures a quarter of an inch. The cut surface of the wall shows a mucous layer rather thinner than normal lying on a much thickened, greyish-white, dense submucous coat, a well-developed muscular coat in which the individual fasciculi are rendered more than usually evident in many places by an increase in the intermuscular connective tissue, and a subserous and a serous coat which also appear to be slightly thickened.

It is very obvious that the great thickness of the stomach wall is the result chiefly of the increased extent of the submucous coat. The cavity of the organ, greatly diminished in extent, is divided into two distinct loculi by a zone of contraction situated in the middle region of the stomach, where the cavity is reduced to a narrow passage a quarter of an inch in diameter; this zone of contraction corresponds to the deep folds marking the external surface of the organ. The cardiac loculus corresponding to the fundus has a diameter of one and a quarter inches; it is rounded in form and its mucous lining has a mammillated appearance. The pyloric loculus, of more tubular form, is divisible into two portions by the character of its mucosa: in the proximal portion, corresponding to the middle third of the stomach, the mucous lining is smooth and thinner than normal; in the distal portion, which apparently corresponds to the pyloric antrum, the mucous lining is of normal thickness and is thrown into a series of irregular folds; it is in this portion of the organ that the submucous coat shows the least change. The two orifices of the stomach show no indications of contraction and the stomach wall is here of normal thickness.

*Microscopical examination.*—Sections of the wall of the

[3] Brit. Med. Jour., 1903, vol. ii., p. 1498.
[4] Cancer of Stomach, p. 54.

cardiac loculus show a thin mucous layer in which only the deeper parts of the tubules are present, and these present extensive and irregular proliferation of their cells, strands of which can be traced down into the underlying submucosa; between these proliferous elements, and in which they appear to be embedded, there is granulation tissue. The submucous coat consists of a dense white fibrous tissue in which the fasciculi of fibrils are well defined, run more or less parallel, have a wavy oblique course, and resemble very closely the fibrous elements seen in dense fibromata and in the atrophic variety of scirrhous carcinomata. Towards the mucous layer this coat is sharply defined; on the other side it penetrates the muscular coat by a series of strands running between the muscular bundles. This dense fibrous tissue shows a great paucity in cells, but in its innermost layers it shows here and there small collections and strands of epithelial cells, many of which can be seen to be directly continuous with similar cells in the mucosa; and in the remainder of its extent, even where it penetrates between the bundles of the muscular coat, there are to be seen isolated strands and small islands of similar cells between the white fibres, the latter in particular being commonly adjacent to some blood-vessel and accompanied by a number of leucocytes. The blood-vessels are few in number and show some thickening of their external coats but no obvious change in their middle or internal coats. The muscular coat does not appear to be increased in thickness; the muscular bundles are separated by strands of dense fibrous tissue penetrating it from the submucosa, which become more and more attenuated in the outer layers and so disappear; the muscle cells here and there show indications of hyaline transformation but otherwise are normal. The subserous coat is slightly thickened and very occasionally one sees a few epithelial-like cells. The serosa appeared normal. Sections taken from the zone of contraction present similar changes, the mucosa is even thinner, and the folding of the stomach wall is seen to be due to contraction of the fibrous submucosa. Sections from the pyloric portion present appearances very little removed from those of the normal organ. Sections of the lymphatic glands from the gastro-hepatic omentum show here and there small collections of cells, very similar to those described in the submucous coat, situated in the trabeculæ and in the perivascular lymphatics.

Attempting to interpret these appearances there can be no doubt that we have to do with an extensive fibrous hyperplasia commencing in, and chiefly limited to, the submucous coat and involving that coat almost exclusively in its proximal two-thirds, a condition which so far corresponds with Brinton's conception of plastic linitis. The presence of the scanty proliferous epithelial elements in the remains of the mucosa and in the midst of the new formed fibrous tissue of the submucosa demonstrates that the lesion is not merely an inflammatory one in this case but that it is essentially a neoplastic change of a particular type which has its analogue in the so-called atrophic scirrhus met with in the mammary gland.

Leeds.

THE FREDERICK REYNOLDS MEMORIAL FUND.—Substantial progress is reported with regard to the Leeds movement to establish a memorial to the late Mr. Frederick Reynolds of Leeds and Ilkley, who had so many friends not only in the medical profession and among pharmacists in the country but was so well known and respected by his fellow Yorkshiremen. At a recent meeting of the memorial fund committee it was reported that over £100 had in the course of a few weeks been paid into the fund at Lloyd's Bank, and there were still many promised contributions to be received. The committee expressed its intention to close the fund at the end of January, 1908. All, therefore, who wish their names to be associated with the memorial are desired to forward their contributions at early convenience. Mr. W. H. Scott, 15, Oakwood-avenue, Roundhay, is the honorary secretary. The committee is negotiating with a view, if possible, to extend the dormitory accommodation at the Arnside summer holiday camp for poor Leeds children, or in other ways to help forward the children's summer holiday movement in a form which will admit of a permanent and distinctive memorial. Some of Mr. Reynolds's cartoon work has appeared in our columns. One sketch in particular, which will be found in THE LANCET, Dec. 3rd, 1904, p. 1583, admirably illustrates a lecture by Mr. Edmund Owen and depicts in a style worthy of Cruikshank the trials of the fifth year student of medicine.

THE

# TUBERCULIN "OPHTHALMO-REACTION" OF CALMETTE.

BY J. W. H. EYRE, M.S. DURH., F.R.S. EDIN.,
BACTERIOLOGIST TO GUY'S HOSPITAL;

B. H. WEDD, M.D. LOND.,
ASSISTANT BACTERIOLOGIST TO GUY'S HOSPITAL;
AND

A. F. HERTZ, M.D. OXON., M.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO GUY'S HOSPITAL.

DURING the past summer considerable interest has been aroused, especially abroad, by the publication of certain new methods for the diagnosis of tuberculosis, based upon the reaction of the tuberculous subject to tuberculin applied either to the abraded skin or the uninjured conjunctiva. In view of the importance of the subject we have investigated that method known as the tuberculin "ophthalmo-reaction" of Calmette, and upon the result of our observations have formed a distinctly favourable opinion of the value of this test in diagnosis. We have tested in all 138 individuals, some on more than one occasion, and of these 63 yielded a positive reaction and 75 remained unaffected. Of the 63 positive cases the majority were unquestionably tuberculous; more important still we have not so far noted a definite reaction in a case in which the absence of tubercle has been conclusively proved. Two cases almost certainly tuberculous failed to give a reaction. One was tested twice, an interval of several weeks elapsing between the two attempts, but no reaction was obtained on either occasion; the patient was under treatment with tuberculin and was improving rapidly at the time the test was applied. The diagnosis of tuberculous periostitis of the orbit was made in this case on the result of an inoculation experiment upon the guinea-pig. The other, a patient suffering from hæmaturia and enlarged kidney, was tested twice with a week's interval, with negative results. No pyuria was present and tubercle bacilli were not found in the centrifugalised deposit from the urine. The diagnosis was made by the surgeon upon the result of cystoscopic examination (a small ulcer considered to be tuberculous being visible), but no operation has so far been performed to confirm the diagnosis. Of the 75 negative cases 17 were adults apparently healthy; 12 were cases of a doubtful nature, in which the presence of tubercle was a possibility, though there was no evidence of its existence; 46 suffered from diseases other than tuberculosis.

Before proceeding to detail our own observations it will be useful to review shortly those already published by certain continental workers.

Von Pirquet, working upon the immunity conferred by Jennerian vaccination, concluded that the appearance of a reaction within 24 hours indicated that the patient had already suffered from vaccinia. Continuing his investigations in the direction of tuberculosis immunity he found that if a few drops of diluted "old tuberculin" were placed upon the skin and scarification carried out in the manner employed in Jennerian vaccination a small papule, which resembled the vaccination pustule, appeared at the point of inoculation. The papule, at first clear red, then dusky red, lasted some eight hours in the case of the tuberculous patient, whilst in the healthy individual such a reaction was only very rarely obtained. Von Pirquet published his observations in May, 1907, and stated, on the basis of 500 tests, that the reaction was positive in almost all cases of clinical tuberculosis among infants. His later work showed the limitations of this reaction—viz., that a positive result was indicative of present or past, active or cured tuberculous infections, so that a positive reaction could only be relied upon during the first year or 18 months of life, while as older infants often reacted and adults reacted almost always (which accords with the experience of the post-mortem room—namely, that nearly all adults are or have been infected with the tubercle bacillus), it was valueless in childhood and adult life. The best reactions were obtained with scrofulous children and those suffering from bone lesions. Occasionally negative results were obtained in miliary tuberculosis, tuberculous meningitis in its later stages, and in children who were already cachectic.

Vallée obtained a similar cuti-reaction in animals, the tuberculous condition of which had been previously ascertained by subcutaneous injection of tuberculin. He further remarked that the reaction was very severe in those which had simultaneously received a hypodermic injection of tuberculin, was definite in those which had received such injections previously to the instillation of tuberculin, but no difference could be detected between those which had received several injections and those which had only received one. Sicard and Descomps stated that the reaction applied to 27 adults was not obtained with sufficient constancy to make the proceeding a useful one for diagnosis. Dufour came to the same conclusion as the result of a series of observations on 20 children of ages varying from three to 14 years. Other observers also came to the conclusion that owing to its unreliability the practical application of the method to diagnosis was limited. Wolff-Eissner of Vienna confirmed in general von Pirquet's observations; and, further, during some experiments upon the effect of certain substances upon the conjunctiva of animals found that, among other poisons, a 10 per cent. solution of original tuberculin produced an inflammatory chemosis of the conjunctiva or even a feeble general reaction. Vallée utilised this reaction as a means of diagnosis in cattle, but considered that owing to the pain and severity of the symptoms produced it was unsuitable for use in the human subject.

Calmette amplified and extended these observations and described in June, 1907, a modification of this method, which he designated the tuberculin ophthalmo-reaction, for diagnosing tuberculosis in the human subject. Finding the presence of glycerine in the ordinary preparations of the tuberculin of Koch to have an irritating effect upon the human conjunctiva he precipitated the glycerinated product with alcohol and redissolved the deposit to form a 1 per cent. aqueous solution. He stated that one drop of this solution in the eye of a patient suffering from *active* tuberculous trouble was followed by a definite reaction which did not occur in the normal individual. The reaction consisted of a congestion of the conjunctiva occurring from three to five hours after the instillation of tuberculin; the membrane became reddened and more or less œdematous; lacrymation followed, and after six hours a muco-fibrinous secretion became evident, the maximum effect being produced in from six to ten hours. No pain was produced, but there might be slight smarting. The temperature was unaffected.

Since this announcement many observers, especially in France, have confirmed the general accuracy of Calmette's statements. Calmette himself details a series of 25 cases, 16 of which gave a positive reaction. A definite diagnosis of tuberculosis had been made in all but one of these. The nine negative cases were suffering from a variety of diseases other than tuberculous. In a later communication Calmette states that he has received records of nearly 1000 cases tested, with unanimous testimony to the diagnostic value of the reaction. He points out that it may be obtained when tuberculosis of bones or glands is present without clinical symptoms.

Letulle among other observers has published a series of cases with the following results:—

*Cases Certainly Tuberculous.*

| | Positive. | Negative. |
|---|---|---|
| Males ... ... ... ... | 43 | 2 |
| Females ... ... ... ... | 32 | 1 |
| | 31 | |

Of the negative cases two were moribund and the diagnosis of tubercle does not appear to have been confirmed at the post-mortem examination in the third.

*Cases Previously Diagnosed as Non-tuberculous.*

| | Positive. | Negative. |
|---|---|---|
| Males ... ... ... ... | 27 | 17 |
| Females ... ... ... ... | 23 | 14 |
| | 10 | |
| | 9 | |

Although the presence or absence of tuberculosis does not appear to have been absolutely confirmed in most of his cases this observer regards the presence of a positive reaction of great value in diagnosis.

Grasset and Rumband, in a series of 31 cases, obtained a positive reaction in seven cases certainly tuberculous and five probably tuberculous; a negative result was obtained in 14 non-tuberculous and three doubtful cases; one case considered to be tuberculous gave a negative reaction and one non-tuberculous case a positive reaction. They consider the difficulty of interpretation and the harm which may be done in certain cases by a knowledge of the presence of tuberculosis limits the usefulness of the method. Prouff obtained a positive reaction in 70 cases known to be tuberculous, with only one exception—a patient in a moribund condition. Sicard and Descomps conclude that the ophthalmo-reaction is always positive in cases definitely tuberculous and is a much more certain and reliable test than the cuti-reaction. They, however, record one case definitely tuberculous which gave no reaction a week before death. Dufour remarks that the reaction is the more reliable the younger the subject. Prouff obtained a negative result in six newborn babies of tuberculous mothers; he failed in his attempts to produce a reaction on other mucous membranes. Comby demonstrated the value of the reaction, which he considers a sure and harmless method of diagnosis, on 53 cases, in a certain number of which the diagnosis was confirmed post mortem. Brunetière, Painblan, Sydney Stephenson, and other ophthalmic surgeons have used the reaction for the diagnosis of obscure conditions of the eye, with what they consider highly satisfactory results, although, as the diagnoses necessarily usually lack confirmatory evidence, their conclusions carry but little weight.

Although the opinion of those who have investigated the reaction appears almost unanimous as to its value, Calmette's tuberculin ophthalmo-reaction usually figures both as judge and jury and also court of appeal, and the presence or absence of tuberculosis does not appear to have been substantiated by the results of other methods of investigation in a sufficient number of cases to enable the unbiassed observer to place implicit reliance upon the recorded results. Also it would seem probable that in a certain number of cases doubt had arisen as to the presence or absence of the reaction, leading to difficulty in interpretation of the results obtained. Accordingly, in selecting our cases for the application of the test we endeavoured to obtain a variety of clinical material in which it was probable that the result recorded by the use of the tuberculin might be controlled and confirmed or disproved by some other method of investigation, such as operation or post-mortem inspection, or by the help of microscopical examination of morbid exudates or affected tissues, or by means of cultivation methods. In our own observations we have used that preparation of Calmette's tuberculin which is put upon the market by Poulenc Frères,[1] the solution being freshly prepared not more than 24 hours before use, strictly according to the directions accompanying the "dry" tuberculin—that is to say, ten drops of sterile distilled water were added with a pipette to the dried powder contained in the small bottle, the rubber stopper replaced, and the contents of the bottle vigorously shaken. In applying the test one drop of the watery suspension of tuberculin was deposited in the lower conjunctival fornix of one of the patient's eyes, near to the caruncle, from the same pipette that was used in preparing the original solution.

Letulle, in describing his results, has noted the fact that the reaction obtained does not always correspond completely with that described by Calmette. He considers as positive any definite redness lasting more than eight hours, and divides his positive results into three grades: (I.) redness only; (II.) marked redness without exudate; and (III.) active reaction with muco-purulent secretion. In the first place, it will be noticed that his Class III. alone corresponds with Calmette's original description. Secondly, Class I. is too vague and ill-defined to serve as a clinical guide; moreover, in practice it is only met with as the early stage of Class II., so that in the event of differentiation of the degrees of reaction being considered advisable we would suggest that three classes should be arranged as follows: Class I., comprising only such cases as those in which the reaction is confined to marked injection and tumefaction of the caruncula and plica semilunaris and some lacrymation. Class II., including cases of marked injection of the vessels of the whole of the bulbar conjunctiva and marked lacrymation, accompanied by the changes in the caruncle mentioned under Class I. Class III., including cases of severe reaction, injection and tumefaction of caruncula and plica similunaris, intense injection and chemosis of the bulbar conjunctiva, accompanied by abundant muco-fibrinous exudation and marked epiphora.

[1] London agent: M. Jos. Flach, 16, Water-lane, Great Tower-street, E.C.

Like Letulle, we have noted cases of accelerated, delayed, and prolonged reactions, but only once have we observed the occurrence of radiating pains in the frontal region to which he refers. We have, unfortunately, not kept a complete record of the degree of the reaction obtained, but the majority of those cases recorded as positive corresponded to Calmette's original description—that is to say, Letulle's Class III. We examined our early cases whenever possible on several occasions, but we soon found that the reaction rarely appeared before about from five to six hours and was not usually well-marked until about 24 hours after instillation of the tuberculin. The date of onset of the reaction was therefore by no means constant, but it will be seen by reference to the detailed table of cases that a reaction if present could always be observed if the eye was examined and compared with its fellow at the end of 24 hours, and we consider that as a routine measure the diagnosis should be based upon the appearances noted 24 hours after the application of the test. Except for slight irritation and the inconvenience caused by swelling and lacrymation, the subjective symptoms noticed have been trifling, even when a very acute conjunctivitis appeared to be present. The reaction usually passes off in four days; sometimes it persists longer, and in a few instances a week or ten days have elapsed before the eye has regained its normal appearance. The only case in which complaint was made of severe pain in the region of the eye was one in which a positive reaction, though obtained, had been delayed. The case was tested a second time after a week's interval, a severe conjunctivitis resulted, lasting for five days, and the patient complained of acute local pain with general malaise and joint pains. Not being an in-patient close observation was impossible, and possibly the symptoms complained of were not entirely the result of the tuberculin reaction. A case of pyuria, which when examined with the cystoscope showed what appeared to be well-marked tubercles in the bladder, failed to give a reaction when first tested, but at the second attempt, made six days later, gave a well-marked reaction. This points to the necessity of repeating the test in suspicious cases which at first fail to react, before definitely excluding tuberculosis. Several of our negative cases have been tested more than once, but the above is the only instance of a second test giving a result which differed from the first.

The general results we have obtained in this investigation may be grouped under diseases of the system affected, and are most conveniently summarised as in the following table:—

| Type of subject. | Total number tested. | Positive. | Negative. |
|---|---|---|---|
| Healthy adults ... ... ... ... ... ... | 17 | 0 | 17 |
| Phthisis ... ... ... ... ... ... ... | 13 | 13 | 0 |
| Other lung diseases ... ... ... ... ... | 25 | 5 | 20 |
| Diseases of the nervous system ... ... | 8 | 1 | 7 |
| ,, ,, circulatory system ... | 4 | 0 | 4 |
| ,, ,, genito-urinary system | 10 | 7 | 3 |
| ,, ,, bones and joints ... | 21 | 15 | 6 |
| ,, ,, skin and glands ... | 17 | 11 | 6 |
| ,, ,, serous membranes ... | 8 | 8 | 0 |
| Various ... ... ... ... ... ... ... | 15 | 3 | 12 |

The details of the individual cases are shown in the tables which follow. In the first of these it will be noted that two cases of tuberculosis of the skin are recorded as failing to respond to the test. Clinically they appeared to be perfectly cured and the results obtained in these cases and in others still under tuberculin treatment lead us to believe that the ophthalmo-reaction will be of value in indicating when the injections may with safety be discontinued. In this connexion we may remark that the instillation of tuberculin causes movements of the tuberculo-opsonin index similar to those which follow a subcutaneous injection, but as the permeability of the conjunctiva differs in different individuals there is no means of judging the exact dose administered in any given case. However, as a note of warning it will suffice to say that the "negative phase" is usually well marked and sometimes lengthy.

*Table of Negative Cases.*

| Sex. | Clinical diagnosis. | Remarks. |
|---|---|---|
| | *Healthy Adults.* | |
| | 14 males tested once; 2 males tested three times; and 1 female tested once. | |
| | *Diseases of Respiratory System.* | |
| M. | Bronchiectasis. | No evidence of tubercle. |
| M. | ? Bronchitis. | ,, ,, |
| M. | Bronchitis. | No evidence of tubercle. Post-mortem examination; lobar pneumonia. |
| F. | Bronchitis. | No evidence of tubercle. |
| M. | Pleural effusion. | ,, ,, |
| F. | ,, | ,, ,, |
| M. | Pleurisy. | ,, ,, |
| M. | Pneumonia. | ,, ,, |
| M. | ,, | No evidence of tubercle. Post-mortem examination; pneumococcus septicæmia. |
| M. | Pneumonia. Empyema. | No evidence of tubercle. |
| M. | Pneumonia. | ,, ,, |
| F. | ,, | ,, ,, |
| M. | Whooping-cough. | ,, ,, |
| M. | ,, | ,, ,, |
| M. | ,, | No evidence of tubercle. Post-mortem examination. |
| M. | Broncho-pneumonia. | ,, ,, |
| F. | ,, | ,, ,, |
| F. | ,, | No evidence of tubercle. |
| M. | Empyema. | No evidence of tubercle. Pneumococcus. |
| F. | ,, | No evidence of tubercle. Post-mortem examination; pneumococcus. |
| | *Diseases of Nervous System.* | |
| M. | Cerebral hæmorrhage. | No evidence of tubercle. Post-mortem examination. |
| M. | Cerebro-spinal meningitis. | No evidence of tubercle. Post-mortem examination; meningococcus. |
| F. | Cerebral abscess. | No evidence of tubercle. Post-mortem examination. |
| M. | Cerebral tumour. | No evidence of tubercle. Operation; cyst. |
| F. | ? Cerebral tumour. | No evidence of tubercle. Operation *nil*. |
| M. | Epilepsy. | No evidence of tubercle. |
| F. | Peripheral neuritis. | ,, ,, |
| | *Diseases of Circulatory System.* | |
| F. | Heart failure. | No evidence of tubercle. |
| F. | ,, ,, | ,, ,, |
| F. | Heart disease. | ,, ,, |
| F. | Pericarditis. | ,, ,, |
| | *Diseases of Genito-urinary System.* | |
| M. | Hæmaturia. | No evidence of tubercle. |
| F. | Pyelitis, complicating pregnancy. | No evidence of tubercle. Bacillus coli alone present in pus. |
| M. | Tuberculous kidney and bladder | Cystoscope showed solitary ulcer of bladder. No pyuria; no tubercle bacilli detected. |
| M.* | Tuberculous kidney. | Tuberculous. |
| | *Diseases of Bones and Joints.* | |
| M. | Osteomyelitis. | No evidence of tubercle. |
| M. | Arthritis. | No evidence of tubercle. Pneumococci present in fluid from joint. |
| F. | Synovitis of knee. | No evidence of tubercle in sections of excised synovial membrane. |
| F. | ? Senile tubercle, foot. | No evidence of tubercle. Skiagraph negative. |
| M. | Hæmophilia. Knee ? tuberculous. | ,, ,, |

*Table of Negative Cases—(continued).*

| Sex. | Clinical diagnosis. | Remarks. |
|---|---|---|
| | *Diseases of Skin and Glands.* | |
| F. | Tubercle of skin. | Healed under tuberculin and actino-therapeutic treatment prior to testing. |
| F. | Lupus, chin. | ,, ,, ,, |
| M. | Tonsillitis. | No evidence of tubercle. |
| F. | Ulceration of tonsil. ? Tubercle. | ,, ,, |
| M. | Cervical glands. Bad teeth. | ,, ,, |
| F. | Glands in neck. | No evidence of tubercle. Operation; simple cyst. |
| | *Various.* | |
| M. | Lead poisoning. | No evidence of tubercle. |
| M. | Gall-stones. | ,, ,, |
| F. | Ganglion ? tuberculous. | No evidence of tubercle. Microscopical sections. |
| M. | Neoplasm, orbit. | Tuberculous. Positive result of inoculation experiment. |
| M. | Perforated gastric ulcer. | No evidence of tubercle. |
| M. | Diphtheria. | ,, ,, |
| M. | Typhoid and diphtheria. | ,, ,, |
| M. | Acute syphilitic laryngitis. | ,, ,, |
| M. | ? Growth. | ,, ,, |
| M. | Dysentery. | ,, ,, |
| M. | Irido-cyclitis. | ,, ,, |
| F. | Intestinal obstruction and congenital dilated colon. | No evidence of tubercle. Post-mortem examination. |

* This patient, tested twice, appears also in the "Positive" table.

*Table of Positive Cases.*

| Sex. | Clinical diagnosis. | Reaction at— 5-6 hours. | Reaction at— 24 hours. | Remarks. |
|---|---|---|---|---|
| | *Diseases of the Respiratory System.—Phthisis.* | | | |
| F. | Phthisis. | − | + | Physical signs, &c. |
| F. | ,, | − | + | ,, ,, |
| F. | ,, | − | + | ,, ,, |
| M. | ,, | + | + | ,, ,, |
| F. | ,, | − | + | ,, ,, |
| F. | ,, | + | + | ,, ,, |
| F. | ,, | + | + | Physical signs, &c Post-mortem examination. |
| F. | ,, | + | + | Physical signs, &c. |
| M. | ,, | + | + | ,, ,, |
| M. | ,, | ± | + | ,, ,, |
| F. | ,, | + | + | ,, ,, |
| M. | ,, | + | + | ,, ,, |
| M. | ,, | ± | + | ,, ,, |
| | *Other Diseases of Respiratory System.* | | | |
| F. | Tuberculous laryngitis. | | + | Laryngoscopic examination; tubercle bacilli in sputum. |
| M. | Pleural effusion. ? Tubercle. | + | + | Clinical symptoms. |
| M. | ,, | + | + | ,, ,, |
| M. | Pleurisy. | ± | + | Clinical symptoms. Post-mortem examination; cavitation at apices. |
| F. | Recurrent pleurisy, enlarged spleen. | − | + | Clinical symptoms. |
| | *Diseases of Genito-urinary System.* | | | |
| M. | Tuberculous kidney. | − | + | Nephrectomy. |
| M. | ,, cystitis. | ± | + | Cystoscopic examination. |
| M. | ,, ,, | + | + | Cystoscopic examination; bacilli in urine. |
| F. | ? Cystitis. | − | + | Diagnosis unsettled. |
| M. | Tuberculous kidney; cystitis. | + | + | Cystoscopic examination. |
| F. | ,, | + | + | Cystoscopic examination; bacilli in urine. |

*Table of Positive Cases—(continued).*

| Sex. | Clinical diagnosis. | Reaction at— 5-6 hours. | Reaction at— 24 hours. | Remarks. |
|---|---|---|---|---|
| | *Diseases of Bones and Joints.* | | | |
| M. | Periostitis of rib. | + | + | Operation. |
| M. | Tuberculous ankle. | − | + | Skiagraph positive. |
| M. | Tubercle of foot. | ± | + | Clinical signs. |
| M. | Sacro-iliac disease. | + | + | ,, ,, |
| M. | ,, ,, | + | + | ,, ,, |
| M. | Psoas abscess and tuberculous bladder. | + | + | Cystoscopic examination; operation. |
| F. | Spinal caries and psoas abscess. | + | + | Operation. |
| M. | Synovitis of wrist. | − | + | Diagnosis doubtful. |
| F. | Hip disease. | ± | + | Skiagraph *nil*. |
| F. | Tuberculous hip. | + | + | Operation. |
| M. | Tuberculous knee. | + | + | ,, |
| M. | Pott's disease and psoas abscess. | + | + | ,, |
| M. | ,, ,, | ± | + | ,, |
| F. | Tuberculous elbow. | − | + | ,, |
| F. | ,, ,, | − | + | ,, |
| | *Diseases of Skin and Glands.* | | | |
| F. | Cervical glands. | − | + | Clinical signs. |
| F. | ,, ,, | ± | + | Operation. |
| F. | Mesenteric glands. | − | + | Clinical signs. |
| F. | Lupus. | + | + | ,, ,, |
| F. | Lupus, arms. | + | + | ,, ,, |
| M. | Lupus, face. | + | + | ,, ,, |
| M. | Lupus, shin. | + | + | ,, ,, |
| M. | Lupus, face. | + | + | ,, ,, |
| F. | ,, ,, | | + | ,, ,, |
| F. | ,, ,, | | + | ,, ,,[1] |
| F. | Pharyngeal gland. | − | + | Clinical signs. Previous operation on tuberculous cervical glands.] |
| | *Diseases of Serous Membranes.* | | | |
| M. | Tuberculous peritonitis. | + | + | Operation. |
| F. | ,, ,, | + | + | Clinical signs. |
| M. | ,, ,, | + | + | ,, ,, |
| M. | ,, ,, | + | + | Operation. |
| M. | ,, ,, | + | + | Clinical signs. |
| F. | ,, ,, | + | + | ,, ,, |
| F. | ,, ,, | + | + | ,, ,, |
| M. | ,, ,, | ± | + | Operation. |
| | *Diseases of Nervous System.* | | | |
| M. | Tuberculous meningitis. | − | + | Post-mortem examination; bacilli present. |
| | *Various.* | | | |
| M. | Addison's disease. | + | + | Post-mortem examination; caseous suprarenals. |
| F. | Sciatica (? early hip disease) | ± | + | Clinical signs. |
| M. | Tuberculous iritis. | − | + | Clinical signs. Inoculation experiment. |

[Since the above tables were prepared we have applied the test to a case of meningitis in a comatose condition. No reaction was observed up to the end of 30 hours, when the patient died. The post-mortem examination demonstrated the existence of general miliary tuberculosis. This experience accords with that of continental observers who state that the reaction cannot be obtained even in undoubtedly tuberculous cases during the last week of life.]

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## NOTE OF A CASE OF BONE ABSCESS CAUSED BY AN "INTERMEDIATE" BACILLUS ALLIED TO BACILLUS PARATYPHOSUS.

BY F. G. BUSHNELL, M.D. LOND., D.P.H. CANTAB.,
PATHOLOGIST TO THE SUSSEX COUNTY HOSPITAL.

THE patient, aged 41 years, was admitted into the Sussex County Hospital, Brighton, under the care of Mr. R. F. Jowers, on May 25th, 1907, for acute suppurative periostitis. There was a history of a mild attack of "typhoidal" fever five weeks previously when under the care of Mr. F. S. Beachcroft of Petworth. The bone affection came on during convalescence. The first illness was attributed to eating whelks bought off a barrow ten days before the onset of the disease, and this foodstuff also caused sickness and diarrhœa immediately after eating in other members of his family. There was diarrhœa during the first five or six days only; "rose spots" were present and on the twelfth or fourteenth day the Widal reaction to typhoid fever was negative. Pain in the ankle and leg came on during convalescence. On examination there was a tender fluctuating swelling of the size of a bantam's egg on the front and centre of the left tibia. This was incised and 100 cubic centimetres of pus were evacuated from beneath the periosteum. The wound healed rapidly.

*Bacteriological report.*—Pus from the abscess contained Gram-negative bacilli. Inoculated in broth there was uniform turbidity in 24 hours at 37°C. due to a motile slender Gram-negative bacillus in pure culture. Gelatin in 24 hours at 22° C. showed numerous transparent surface colonies with rounded or irregular margins not liquefying the jelly. On Conradi-Drigalski medium small transparent colonies grew. The bacillus measured 0·5 to 1 or 2 $\mu$, formed a moist grey growth on agar at 37° C., formed no spores, no pigment, and possessed no proteolytic powers; it fermented lævulose, galactose, dextrose, maltose, dulcit, and mannite with gas formation; lactose, raffinose, and sucrose being practically unaffected. Milk was acidified and clotted in 48 hours on two occasions, remaining so for three months; on one occasion it was rendered alkaline and clotted. No indol was formed, and shake taurocholate neutral red agar showed no appreciable yellowing. As the typhoid bacillus coagulates milk and renders glucose acid without the formation of gas this is classed generally as paratyphoid (with anomalous variable powers of affecting milk). Sub-groups of the paratyphoid (known also as the hog cholera, paracolon, Gärtner, and intermediate) are formed by the reactions with milk. Thus the ordinary form shows an initial acidity followed by alkalinity in from two to ten days. Sub-group A produces definite persistent acidity but not enough to coagulate milk. These correspond to Buxton's paratyphoid $\beta$ (which resemble the paracolons in culture) and paratyphoid $\alpha$ which is unlike them, though both cause typhoidal symptoms. Ford similarly subdivides the paratyphoid bacilli by the use of xylose and arabinose into the hog cholera, which cannot ferment these carbohydrates, and those parasitic to man (icteroides and paratyphoid), bacillus enteritidis Gärtner and swine dysentery and cattle disease, which can. (Comparative tests were made with paratyphoid $\alpha$ and $\beta$ 04 Buxton in the Ralli Laboratory, and with Schottmüller, Gärtner, and others.)

The serum reactions of the patient were significant. His serum was on three occasions negative to bacilli typhi, once during the first illness and twice during the bone affection in 10 per cent. dilutions. On the other hand, he was positive in 1 per cent. dilutions in 30 minutes to Schöttmüller, to paratyphoid $\alpha$ 04 Buxton, and to Gärtner, but negative to bacillus coli. On three occasions the bacillus agglutinated at once with 1 per cent. dilutions of the patient's serum completely.

*Remarks.*—Though paratyphoid fever is not uncommon in Sussex, a bone abscess following and due to this infection is rare and unrecorded. The sudden onset of the symptoms of poisoning by other members of the family after the eating of the shell-fish is comparable to meat poisoning caused by bacillus enteritidis Gärtner. In this patient the immediate effect was *nil* but the system was invaded by the bacilli.

Diagnosis would be facilitated by the use of paratyphoid bacilli in serum test. It is notable that Cushing isolated his bacillus O from an abscess following a typhoidal illness and this was erratic in its behaviour to milk as was ours. Castellani also recorded at the meeting of the British Medical Association, 1907, a bacillus which acidified and clotted milk and agglutinated with the serum of a patient suffering from appendicitis from the pus of which it was isolated.

Brighton.

## THE AFTER-TREATMENT OF CASES OF SUPRAPUBIC CYSTOTOMY: A NEW AND ECONOMICAL METHOD.

BY HAMILTON IRVING, M.B., B.S. LOND., M.B., CH B. VICT., M.R.C.S. ENG.,
LATE HOUSE SURGEON, MANCHESTER ROYAL INFIRMARY; LATE HOUSE SURGEON AND HOUSE PHYSICIAN, EVELINA HOSPITAL FOR CHILDREN, SOUTHWARK BRIDGE-ROAD, LONDON, S.E.; LATE SENIOR HOUSE SURGEON, ST. PETER'S HOSPITAL FOR STONE, COVENT GARDEN, W.C.

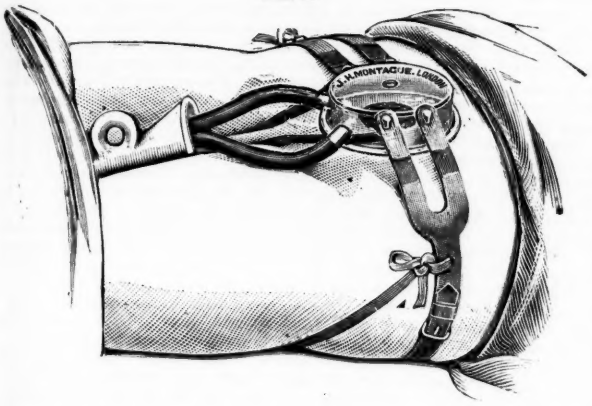
THE patient upon whom suprapubic cystotomy has been performed and who is thereafter buried in the usual bundle of "absorbent" dressings has to pass through a period of great discomfort, and it seems strange that nothing simple and satisfactory has previously been devised which will prevent this discomfort.

With a view to keeping the patient dry pumps of various patterns have been invented which will suck the urine out of the bladder. These are efficient in the early stages of after-treatment, provided that the patient is peaceful and intelligent and can have plenty of attention from his nurses. Their disadvantages are that they are complicated, expensive, and cumbersome, occasionally cause a flood, and limit the movements and therefore the comfort of the patient. Furthermore, the knowledge that he is playing an important part in an apparently complicated system of hydraulics is a constant worry to a patient, and I have found that he is always glad to be relieved of such apparatus. There is also the dressing devised by Mr. G. H. Colt, which has evidently answered well in his own hands, and which I found invaluable for sealing off the suprapubic wound in one case where a foul intra-abdominal abscess had to be opened a week after prostatectomy. But my general experience has been that it is messy and difficult to apply, leaks from the beginning, and comes off altogether in three or four days, sometimes leaving the skin excoriated, while it prevents the patient from turning about comfortably in bed. Moreover, the fact that it hermetically seals the wound under a glass case puts it out of court for at least the first fortnight after operation.

During my term of office as house surgeon at St. Peter's Hospital, Covent Garden, I devised an apparatus which keeps the patient dry from the time of operation until the wound is healed, which is simple of application, and which lightens the work of both nurses and surgeon. It has now been used in about 30 cases in the hospital, and the members of the honorary staff are using it in their private practice. It has thus had a fair trial, and I wish to bring it before the notice of the profession. The principle is the simple one of a celluloid cap kept in place over the suprapubic wound by elastic pressure and possessing outlet tubes for the escape of urine. The celluloid portion is shaped like a straw hat

having a small rim slightly curved with an upward concavity and a crown that can be removed like a lid. It is fastened in place by means of a strap passing round the abdomen, to the ends of which elastic bands are fixed, and a tendency to slip upwards is counteracted by tapes passing from the lower end round the perineum and tied to loops in the abdominal strap. The elastic bands have eyes which fit over hooks on the celluloid cap or "hat." The hooks are attached on a level with the lid, so that the elastic pressure is exerted almost perpendicularly and keeps the rim in contact with the skin all round the wound, absolutely preventing leakage. The rim being curved, its edge does not indent the skin in any way. The urine escapes by two outlets, one on

FIG. 1.




each side at the lower end of the apparatus, and passes through indiarubber tubing into a suitable urinal bottle which rests in the bed between the patient's legs. The lid is easily slipped on and off and has a hole in the centre which is just big enough to admit easily a No. 24 F catheter. The abdominal band is drawn to the requisite degree of tightness by means of strap and buckle, and it is best to see that it fits the patient properly before operation. Subsequently it will only take a few seconds to apply the apparatus. At St. Peter's Hospital it is not applied until the morning after the operation, because the foot of the bed is always kept raised for the first 12 hours, which prevents the apparatus from draining, and also the pressure of a tight

FIG. 2.

abdominal bandage is beneficial until all trace of shock has passed. After this the patient wears it until the wound is healed and no dressings of any kind are needed. It should be removed and well cleaned about once every three days. Scrubbing with carbolic lotion (1 in 20) sterilises it efficiently and it can be used for an indefinite number of cases. The only disadvantage I have found is that it is not suitable for an emaciated patient with sunken abdominal wall and prominent os pubis.

The advantages are numerous and obvious. In the first place, the patient prefers being dry to being swaddled in sloppy dressings and certainly runs less risk of catching cold. He lies in a dry sheet and is thus less liable to bedsores and escapes the disturbance to rest and equanimity caused by frequent changes of dressing. It should be pointed out here that the apparatus need *not* be applied *tightly* to the discomfort of the patient: very little pressure is sufficient to prevent leakage. The patient can turn over on either side at will without the necessity of shifting the urinal. Of course, he occasionally kicks his urinal about during sleep and wets the bed, but the non-spillable urinals should prevent this. Secondly, it is of great value to be able to estimate the quantity and quality of the urine that is being passed, especially in cases where the kidneys have been damaged by back pressure and there is a danger of uræmia after operation. Thirdly, it really seems that the healing of the wound is accelerated. The urine flows out at the lower angle and sloughs and discharge get away freely, the result being that the upper part of the wound more frequently heals by first intention than used to be the case when the whole was covered by a plug of sodden dressing. Also the pressure of the rim all round supports and fixes the sides of the wound. Fourthly, the wound can be dressed and the bladder irrigated in about half the usual time. All that is necessary is to replace the urinal by a receiving dish and remove the lid of the "hat." The bladder can be freely irrigated and the wound cleaned, and there is no need to place a mackintosh in the bed and to take precautions to prevent the lotion running about all over the patient. Continuous irrigation of the bladder is sometimes called for and is very easy to arrange. It is only necessary to place a rubber catheter, connected by tubing to a large douch can, through the hole in the lid down into the bladder, and replace the short indiarubber outlet tubes by long ones passing out of the bed into a large receptacle. Irrigation can then be carried on continuously or intermittently at will. Fifthly, the wound can be inspected at any time without even removing the lid of the apparatus. Sixthly, the labours of the nurses are greatly diminished, as they have not to be continually changing dressings, and the patients' backs need less attention. Finally, the diminution in expense is enormous. The cost of dressings for a single case treated in the ordinary way with absorbent wool or cellulose will be anything from £2 to £10. With this apparatus the dressing bill is *nil*. The laundry bill for washing sheets is also diminished. The following case offers a good example of the advantages and ecomony of the apparatus.

The patient was a male, aged 52 years, upon whom suprapubic cystotomy was performed for cystitis. The apparatus was applied on the second day after operation. All the urine was collected and examined periodically. It remained so dirty that continuous irrigation was considered advisable and was carried on for five days without inconvenience to the patient. After this the wound was allowed to heal and the urine was still collected and could be watched getting clearer. The wound healed in a month and the apparatus was worn during the whole time. The estimated cost of dressings used was less than sixpence.

Mr. P. J. Freyer writes to me: "I consider this apparatus thoroughly practical and the only safe one that has been devised for suprapubic cystotomy."

I must thank the honorary staff of St. Peter's Hospital for giving me the opportunities to devise and perfect this apparatus. To the maker, Mr. J. H. Montague, of 69, New Bond-street, London, W., I am indebted for the great trouble he has taken and the skilled workmanship which he has supplied.

London, S.W.

BRISTOL LUNATIC ASYLUM.—At a recent meeting of the Bristol town council it was decided to enlarge the Bristol Asylum at Stapleton, so as to give accommodation for 90 additional male patients. The institution will then be available for 1045 patients—namely, 495 males and 550 females. The cost of the undertaking is estimated at £15,340.

# A CASE OF POISONING BY POTASSIUM BICHROMATE.

BY ALFRED M. GOSSAGE, M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN TO OUT-PATIENTS AT THE WESTMINSTER HOSPITAL, LONDON, S.W., AND AT THE EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL, E.;

AND

JULIUS M. BERNSTEIN, M.B. LOND., M.R.C.P. LOND.,
ASSISTANT PATHOLOGIST TO, AND CURATOR OF THE MUSEUM AT, THE WESTMINSTER HOSPITAL.

POISONING by the use of potassium bichromate is very uncommon and is usually the result of attempts at suicide. We have been able to collect 21 cases from English and foreign literature and from a perusal of these cases it appears that the salt acts first as a violent irritant to the stomach and intestines. The ingestion of the salt is followed within about a quarter of an hour by burning of the throat, violent pain at the epigastrium, and urgent vomiting of ropy fluid. Later there are severe purging and collapse, with pale anxious face, cramps, unconsciousness, and scarcely perceptible pulse. The severity and rapidity of onset of the symptoms naturally depend on the amount of the poison taken. Death usually takes place in a few hours (in one case it occurred within 40 minutes),[1] but it may be postponed until from 12 to 14 hours after taking the poison. If the patient survives as long as this he generally recovers gradually but may suffer from abdominal tenderness, suppression of urine, vomiting of ropy mucus, and purging of greenish bloody stools for two or three days. One patient[2] was found dead 12 hours after taking the poison without there being any sign of his having had any purging or vomiting, although a large amount of the bichromate was found in the stomach after death. Ruttan and Lafleur[3] point out that in their case, in which death occurred within an hour of taking the poison, the blood contained the neutral chromates of potassium and sodium and gave the spectrum of methæmoglobin. They found a similar condition of the blood in experiments on rabbits and suggest that this action on the blood may be the cause of death in some cases.

Occasionally this absorption of the salt into the circulation may be delayed until after the cessation of the more violent symptoms of irritant poisoning. This results in a yellow or greenish colouration of the skin and mucous membranes (usually called jaundice) and the excretion of salts of chromium in the urine without any bile pigment. Evidently in these circumstances the bichromate is reduced to the chromate in the intestine before absorption, whereas in Ruttan and Lafleur's case it was absorped as bichromate and reduced in the blood. There is generally also some albuminuria and sometimes glycosuria. The irritant symptoms usually continue in a milder degree, the pulse remains remarkably weak, and there are mental symptoms such as stupidity and restlessness. We have discovered three cases of this class reported in medical journals. In one of these,[4] the case of a man, aged 60 years, who had swallowed three drachms of the salt, there was a deep yellow colouration of the conjunctivæ on the third day, after the patient had recovered from the urgent symptoms of irritant poisoning; there was subsequently a rapid and complete recovery. In another case[5] the irritant symptoms lasted for over a week. The skin became yellow on the third day. On the seventh day the patient was stupid and restless, the skin was bright yellow, and the urine contained a trace of albumin and some sugar and chromium were found in it by analysis. The recovery in this case was very slow and protracted. In a case of suicide in a man, aged 43 years, reported by Klimisch,[6] the patient on recovery from the primary collapse became "jaundiced" and had albuminuria and chromium was found in the urine. Death took place on the tenth day and post mortem there were found nephritis and hæmorrhages into the lungs. In experiments with the poisoning of rabbits by potassium bichromate kidney changes were always found after death. It is interesting to note that the yellow discolouration of the skin seems to be the rule in poisoning by lead chromate. R. C. Smith[7] describes three cases which occurred along with many others in a Yorkshire village from weaving cloth dyed with yellow chrome. The symptoms were constipation or diarrhœa with sap-green motions, abdominal pain, sometimes vomiting, blue line on the gums, and yellow discolouration of the skin and conjunctivæ; albuminuria occurred sometimes and in one case chromium was found in the urine, but in no case was bile found in the urine. A similar case is described by Wilson Smith,[8] but Stewart,[9] who reports the poisoning of nine persons by lead chromate, which was used to colour buns, states that the chief symptoms were colic, some diarrhœa and vomiting, and a blue line on the gums, while only one case turned yellow.

Chronic poisoning from working with potassium bichromate leads to sores on the skin and to sores in the nose, both probably the result of local irritation.

We are indebted to Mr. G. E. Cope, who attended the patient within an hour of his taking the poison, for the early history of the following case. A man, aged 60 years, accustomed to use potassium bichromate for the purpose of staining wood, was stated to have swallowed "by accident" two sips, about one and a half ounces, of a saturated solution, which would represent about 72 grains of the solid salt. He was reported to have previously, 20 years before, taken some dilute solution of the bichromate in mistake for beer, but on that occasion he recovered with few or no symptoms of poisoning. On the present occasion he immediately drank four ounces of milk as an antidote and for half an hour he felt no ill-effects. Vomiting and purging then commenced suddenly and continued up to the arrival of Mr. Cope who found him rather collapsed but still able to go upstairs and to get into bed without assistance. His pulse was 66 and the temperature was 97° F., the eyes being suffused and the pupils slightly dilated. The patient was put on a milk diet and was given half a drachm of carbonate of magnesium, two grains of carbonate of ammonium, and five minims of rectified spirit of wine every two hours. The vomiting and diarrhœa continued but gradually got less urgent during the next day. There were much thirst and dryness of the throat, while the tongue was furred and stained with the bichromate. Beyond some aching across the epigastric region there was no complaint of pain. On the third day vomiting occurred twice, the vomit containing mucus and a little blood besides the milk with which the patient was fed. The urine was apparently passed in fair amount and there was no difficulty in the act of micturition. On the fourth day the vomiting and diarrhœa ceased, but there was considerable epigastric tenderness. The patient was very depressed and very slow in answering questions and he preferred to be left alone. This mental condition did not alter, except to become rather more marked, until his death. The yellow colouration of the skin was first noticed on the fifth day and it gradually increased in intensity. From the fifth to the seventh day there was distressing hiccough: the bowels were now constipated and a mild aperient had to be administered. On the ninth day some blood was vomited after getting up and going to the closet to defæcate. The patient complained also of abdominal pain and there was more tenderness in the epigastric region. On this day he was admitted into the Westminster Hospital. When seen a few hours after admission he did not appear to be very ill but his skin and conjunctivæ were a bright-yellow colour. Beyond some general abdominal tenderness, most marked at the epigastrium, nothing abnormal was found on physical examination of the chest and abdomen. On the inner side of the upper lip there was a small superficial ulcer of a bright-yellow colour. The pulse was of low tension and remarkably feeble. The patient complained of nothing beyond slight abdominal pain but he was very depressed and stupid and there was great difficulty in getting him to answer questions. He, however, sat up in bed, read the newspaper, and asked for anything he required. During the night succeeding his admission to hospital he died quite suddenly.

*Pathological findings.*—At the necropsy performed 17 hours after death the appearances were as follows. The body was spare; there was rigor mortis; yellowish tint prevailed all over the skin, the conjunctivæ, the dura mater, the endocardium, and the intima of the blood-vessels; the lips and buccal mucosa were of a yellowish-brown hue;

[1] Stewart: Brit. Med. Jour., vol. ii., 1888, p. 420.
[2] Wilson: Medical Times, 1844, vol. ix., p. 435.
[3] Montreal Medical Journal, vol. xvii., 1888, p. 81.
[4] Mclachlan: Glasgow Medical Journal, vol. xvi., 1881, p. 31.
[5] Pal: Wiener Medicinische Wochenschrift, 1902, No. 52, p. 845.
[6] Wiener Medicinische Wochenschrift, 1889, p. 732.
[7] R. C. Smith: THE LANCET, March 11th, 1882, p. 391.
[8] Guy's Hospital Reports, 1897, p. 279.
[9] Medical News, June 18th, 1887, p. 676.

there was one small superficial ulcer on the left inner side of the upper lip; the tongue was coated with a blackish fur; there was no other ulceration of the mouth or of any part of the alimentary tract. The stomach was distended by a large quantity of a blackish grumous fluid and a similar fluid was found in the duodenum; the posterior wall of the fundus of the stomach was hyperæmic and the mucosa in places was of a greenish tint, but the appearances were quite compatible with post-mortem changes. The mucosa of the large intestine was olive-green in colour, that of the small intestine less so. The liver, which weighed 64 ounces, was of a yellowish-green colour and firm on section; the gall-bladder was contracted and contained a little yellowish bile and two small calculi of about a quarter of an inch in diameter, but there was apparently no obstruction to the flow of bile. The peritoneal sac contained a little yellow stained serous fluid. The pancreas was normal. The spleen weighed 4 ounces and was friable. The kidneys together weighed 14 ounces; the capsule of each stripped readily, leaving a smooth surface, and the cut surface was a pale yellow and striated; the cortex was rather large in extent. The pelvic viscera were normal. The heart weighed 9 ounces, the muscle being soft and friable; there was no endocarditis and the arteries were fairly good, save for a patch of atheroma with calcification in the aorta near its bifurcation. The blood everywhere was fluid and of a very dark colour. The right lung weighed 22 ounces and the left 16 ounces; marked hypostatic changes with engorgement and œdema were observed. The trachea was reddened and the larynx and epiglottis were stained yellow. The brain weighed 48 ounces and was normal and firm. Death had occurred from pulmonary œdema and cardiac failure.

*Microscopical examination.*—The kidneys showed considerable hyperæmia, a few atrophied Malpighian bodies, numerous casts, and in some places free cells in the tubules, the epithelial lining cells of which were small; there was also a slight increase of the connective tissue elements throughout. This may be regarded as a form of acute nephritis. The liver showed merely bile stasis and hyperæmia.

*Summary of morbid appearances.*—There was universal yellowish colouration of all the tissues and fluids of the body; the blood was dark and fluid; there were as well as some questionable inflammation of the posterior wall of the stomach a slight excoriation of the upper lip and an acute nephritis. Hypostatic changes in the lungs were observed and some post-mortem changes such as were noted in the cardiac muscle.

*Chemical examination.*—The gastric contents alone were examined and a careful analysis by Mr. J. Nelson of Birkenhead revealed no trace of chromium.

The case reported above conforms closely to those described by Pal and Klimisch and it is interesting to note that death occurred on the tenth day both in Klimisch's case and in ours. It is important to recognise that in bichromate of potassium poisoning danger is not by any means over when the patient recovers from the earlier symptoms of irritant poisoning, since if any of the salt is left in the intestine it may be absorbed and cause death after a lapse of about ten days. There are doubtless more than 21 cases hidden away in medical literature but we have been unable to find more.

*Additional references.*—The following references have not been already given.—Taylor: Guy's Hospital Reports, 1851, vol. vii., p. 214 (refers to two other cases). Andrews: THE LANCET, Feb. 10th, 1872, p. 210. Maschka: Schmidt's Jahrbuch, 1878, Band clxxviii., p. 237. Dunbar Walker: THE LANCET, Sept. 27th, 1879, p. 464. Archer Warwick: THE LANCET, Jan. 31st, 1880, p. 167. M'Crorie: Glasgow Medical Journal, 1881, vol. xv., p. 378. Macniven: THE LANCET, Sept. 22nd, 1883, p. 496. Waugh: THE LANCET, Dec. 19th, 1885, p. 1135 (two cases). Fowler: Brit. Med. Jour., 1889, vol. i., p. 1113. Two cases of death from poisoning by bichromate of potassium are shortly reported in the Pharmaceutical Journal, 1894, Third Series, p. 24, and 1896, Fourth Series, 3, p. 542. Reineboth: Vierteljahrschrift für Gerichtliche Medicin, 1895, vol. x., p. 10. An account of the animal experiments is given by Kobert, Intoxikationen, Band ii., p. 52.

MEDICAL INSPECTION OF SCHOOL CHILDREN.—The majority of the boards of guardians in the county of Somerset have adopted the resolution of the Somerset Poor-law and Rural District Councils Association against the appointment of a county medical officer of health who is also to undertake the duties of the inspection of school children. The Wells board of guardians on Dec. 2nd also adopted the resolution, holding that the present system met all requirements.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### NOTE ON A CASE OF STATUS LYMPHATICUS WITH REFERENCE TO THE ADMINISTRATION OF ANÆSTHETICS.

BY H. H. RUBRA, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.,
SENIOR ANÆSTHETIST TO THE GREAT NORTHERN CENTRAL HOSPITAL;
AND
A. CARNARVON BROWN, M.R.C.S. ENG., L.R.C.P. LOND.,
SENIOR HOUSE SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL.

A YOUTH, aged 17 years, was admitted to the Great Northern Central Hospital on July 27th last for submucous resection of the septum of the nose. He was suffering from deflected septum of the nose to the right side and some slight adenoid growth. He could hardly breathe at all through the nose. The heart showed no sign or symptom of disease and the lungs were healthy. There was no albumin or sugar in the urine. Dr. Rubra examined him in the inner anæsthetic room. He was found to be a rather anæmic boy, tall for his age, very loosely built, and indifferently nourished, but not markedly so considering that his occupation was that of an indoor servant. His cheek-bones were high and prominent, he had a narrow projecting jaw, his central incisors overlapped and were rather prominent, but not the projecting incisors which are associated with adenoids. He moved slowly with a "flopping" walk. He was not nervous for a patient about to undergo an operation and met Dr. Rubra with a smile. He suggested what the old writers call a lymphatic temperament. The heart sounds were rather distant. Respiration, with mouth open, was free. As the surgeon had elected to operate in the chair—that is, in the half-upright position—the boy was moved into the theatre and made comfortable. 5 minims of a 5 per cent. solution of cocaine and 5 minims of a 1 in 1000 solution of adrenalin were injected under the mucous membrane previously to starting the anæsthetic. Dr. Rubra administered equal parts of chloroform and ether through a Junker inhaler with the face-piece. His reasons for giving ether with the chloroform were that he did not think the patient was the type of case to become congested in the nose, and he was one of those persons in whom, in his opinion, chloroform was liable to cause cardiac failure. It was administered slowly and continuously for eight minutes. At the end of this time the gag was put into the mouth and the Junker tubing was changed on to the cylinder on the gag. There was no struggling. Dr. Rubra signified to Dr. J. Gay French that he might commence and he made the first incision in the mucous membrane. At this period anæsthesia was light and the pulse and respirations were normal; the pupils reacted to light and were contracted. There was also a slight conjunctival reflex; in a word, the state required for nasal work. He moved very slightly at the incision and Dr. Rubra was going to give a little more anæsthetic when it was noticed by all that his colour was pale. There was also a blue congested patch on the cheek. His breathing was deep and quite regular, perhaps rather quicker than usual but not markedly so. Eight minims of liquor strychninæ were immediately administered by hypodermic injection and the patient was lowered into the horizontal position. The pulse at the wrist could not be felt. The reflexes were still present. Deep breathing continued for one and a half minutes. During this time the usual remedies were tried, including oxygen, brandy and strychnine hypodermically, hot cloths over the heart, galvanism, &c., but soon the pupils dilated and became fixed and respiration failed. Artificial respiration for half an hour did not bring back any signs of life, and we had no doubt that the patient died from syncope at the time the pupils dilated. Dr. Rubra did not think at the time that either the cocaine or the upright position, which he had been in the habit of using for nasal surgeons for a long time, had anything to do with the fatal ending and that an abnormal condition would be found. The amount of C.E. used was under two drachms.

*Necropsy.*—There was no increase of fluid in the pleural cavities. Some fibrous adhesions between the lower lobe of the right lung and parietal pleura were present. A persistent large thymus was present, weighing 1½ ounces. There were no enlarged lymphatic glands in the chest. The lung tissue showed acute venous congestion but no evidence of tubercle. There was no organic disease in the heart and the right cavities contained a small quantity of fluid but no clots. The liver and kidneys were quite healthy. The spleen was larger than normal and weighed 6½ ounces. The Malphigian bodies were unusually large and were well marked out. The tissue itself was firm. The lymphoid nodules in the mucous membrane of the stomach were large and well marked out. Peyer's patches in the intestine were not increased in size. The mesenteric glands were enlarged but not tuberculous. The brain was quite normal.

In conclusion, this case shows the difficulty there is in diagnosing this disease before operation and how easily it may be overlooked at the post-mortem examination.

## NOTE ON A CASE OF BILATERAL OVARIAN DERMOID TUMOUR ASSOCIATED WITH PREGNANCY.

BY MALCOLM CAMPBELL, M.A., M.B., CH.B. EDIN., F.R.C.S. EDIN.,

CLINICAL GYNÆCOLOGICAL TUTOR, ROYAL INFIRMARY, EDINBURGH.

BILATERAL ovarian dermoids are sufficiently rare to warrant the recording of their occurrence. When, moreover, the condition is found associated with pregnancy, and further, when the tumours are removed by laparotomy without the interruption of pregnancy, the case becomes one of such interest that no apology is needed for desiring to record it.

The patient was 32 years of age and was admitted to Ward 36 of the Royal Infirmary, Edinburgh, on June 2nd, 1906. She had been married 12 years and had five children, the eldest being ten years old and the youngest two years and three months. Beyond some pre-menstrual dysmenorrhœa before marriage there was nothing to note in regard to menstruation, which began at 14, was of 28-day type, and lasted four days. The patient had had amenorrhœa since the previous March. Her present illness began six months before admission. Prior to that time she had enjoyed perfect health.

On admission the patient complained of pain in the right side which went round to the back. The onset of the pain in January, 1906, was sudden and the pain was so severe that she had to remain in bed for a week; during this time she was only able to lie on her left side. During this attack there was some vomiting. There was no vaginal discharge. Since the initial attack there had been several returns of the pain at intervals. The pain came on without any discoverable cause, lasted for about an hour, and then passed off. The pain was worse in the right iliac fossa; then from there it radiated to the back. She occasionally had vomited with these attacks. About three months before admission she first noticed a swelling on the right side of the abdomen. The last attack of pain occurred about a week before admission.

On examination the abdomen was seen to be slightly distended by a swelling passing from the right lumbar region to mid-way between the sternum and the umbilicus. This swelling moved freely with the respiratory movements. On palpation a tumour was found extending from the mid-line to the anterior axillary line on the right side. The tumour, which was flattened antero-posteriorly, seemed to be disc-shaped and was about four inches in diameter. The tumour was not sensitive on palpation. It was not uniform in consistence and could be moved freely. If pulled upon a tense band could be felt running down into the pelvis. The uterus could be felt in the hypogastric region. There was no free fluid in the abdomen. On vaginal examination the uterus was found to be enlarged and undergoing rhythmic changes in consistence. There was marked pulsation in both lateral fornices. Through the left lateral fornix posteriorly a hard, irregular, non-sensitive body of about the size of a hen's egg could be felt; this was evidently the displaced left ovary. The right ovary could not be felt.

On June 6th Dr. N. T. Brewis opened the abdomen. The tumour above described was found to be an ovarian tumour with a very long pedicle growing from the right side; it was removed in the usual way. On removal it was of about the size of a fœtal skull and on being incised was seen to be a dermoid tumour containing sebaceous matter, hair, and teeth. The left ovary was examined; an attempt was made to resect this ovary in order to conserve for the patient some ovarian tissue; as this, however, was found impracticable the whole ovary was removed. On examination it was found also to be a dermoid cyst containing sebaceous material and hair.

The patient made a most satisfactory recovery. Before leaving hospital, a month after the operation, she felt fœtal movements, but on auscultation no fœtal heart sounds could be heard. Six months later she was delivered of a living full-time child.

The fact that both ovaries were removed at the end of the third month of gestation adds another point of interest to the case, for Heil has shown that abortion is most likely to occur in the cases in which the corpus luteum is removed before the fourth month. In regard to the endeavour to conserve a portion of ovarian tissue it is interesting to note that Matthaei, Schroeder, and Terrier have all recorded cases in which pregnancy followed the removal of bilateral ovarian dermoids where it had been found possible to conserve some ovarian tissue.

In conclusion, I should like to express my thanks to Dr. Brewis for permission to publish this case.

Edinburgh.

## NOTE ON A CASE OF SUPERNUMERARY MAMMÆ.

BY ALFRED W. HAYLES, M.R.C.S. ENG.

AS there have not been a great number of the above cases recorded perhaps the following notes may be of interest to the readers of THE LANCET.

The patient, aged 32 years, came to me complaining of a swelling under each arm. She had always noticed a slight enlargement even as a girl. Three years ago she became pregnant and found the swellings gradually increase; at the period of lactation they were so large and painful as to interfere with the free use of her arms. After weaning her child the enlargements reduced themselves to their previous size. Finding herself again pregnant (and in the fifth month) she wished that something could be done to save her the inconvenience and pain which she had suffered on a previous occasion. On examination I found in each axilla a small tumour, adherent to the skin but freely moveable on the under surface. I removed them under chloroform, the wounds healing by first intention. Under the microscope the structure of the tumours is that of a secreting acinous gland and, remembering the above history and situation, one can but conclude that the diagnosis is "supernumerary mammæ." Each natural breast was unusually large for a woman five months pregnant.

Pontnewydd.

# Medical Societies.

## ROYAL SOCIETY OF MEDICINE.

### CLINICAL SECTION.

*Exhibition of Cases.*

A MEETING of this section was held on Dec. 13th, Sir THOMAS BARLOW, the President, being in the chair.

MR. EDGAR REID (introduced by Professor W. OSLER) showed a case of Ochronosis. The patient was a man, aged 68 years. A large ulcer on each leg had been dressed twice daily with carbolic oil, 1 in 20, during a period of 30 years. Six years ago the ears and whites of the eyes began to turn black and two years ago the urine was first noticed to be dark. In June, 1907, the concavity of each ear was stained a deep blue-black and the sclerotics were stained black in their exposed portions. The extensor tendons of the fingers were bluish-black in colour over the knuckles and the latter showed a slight blue staining. The skin of the face and exposed parts was of a dusky hue as compared with the covered parts. Since June the patient had been kept in bed and the ulcers had steadily

diminished in size. Although the carbolic dressings had been continued the staining had perceptibly diminished. Mr. Reid said it was the second case recorded in the British Isles; the first was fully described in THE LANCET of Jan. 6th, 1906, p. 24.—Professor OSLER passed round a copy of Virchow's "Festschrift," Band ii., 1891, containing the article by Professor E. Bostroen, "Ueber die Ochronose der Knorpel," illustrated by coloured plates.—The discussion was continued by Dr. W. HALE WHITE, Dr. F. PARKES WEBER, and Dr. A. E. GARROD.

Professor OSLER showed a case of Splenic Polycythæmia with Cyanosis. The patient was a very healthy, hard-working woman in whom, within the past two or three years, there had been slight failure of health and strength but no other symptoms of importance. She was permanently cyanosed. She presented in an unusual degree the three characteristic features of the disease: a permanent cyanosis, a greatly enlarged spleen, and a polycythæmia of 10,000,000. In regard to the leucocytes there was no increase. There was no marked variation in the size of the red blood corpuscles. There were nucleated red cells in moderate numbers, chiefly normoblasts.—The case was discussed by Dr. PARKES WEBER, Dr. W. PASTEUR, and the PRESIDENT.

Mr. T. H. OPENSHAW showed a case of Traumatic Dislocation of the Hip in an adult reduced by manipulation after 13 months. The patient was knocked down by a motor-car on Feb. 22nd, 1906. The left femur was fractured in the centre and the left hip dislocated. He was admitted into the London Hospital on Jan. 21st, 1907, wearing a 5-inch clump boot with an actual shortening of 3¾ inches and flexion and adduction contracture of the hip. Tenotomy, extension, and manipulation were repeatedly performed and the left hip was replaced on March 14th, 1907. The movements of the hip were now limited but normal. The shortening was 1½ inches, due to overlapping of the fragments of the femur.

Dr. PARKES WEBER showed a case of Arteritis Obliterans of the Lower Extremity with Intermittent Claudication. The patient was a man, aged 42 years, who complained of cramp-like pains in the sole of the left foot and calf of the left leg occurring after walking for a few minutes and obliging him to rest. When the legs were allowed to hang over the side of the bed the distal portion of the left foot became red and congested-looking. No pulsation could be felt in the dorsal artery of the left foot or in the posterior tibial. There was no evidence of cardio-vascular or other disease. Recent treatment had included internal use of iodipin, subcutaneous injection of fibrolysin, local hot-air baths, and local passive congestion. An ulcer on the little toe had slowly healed (dermatol used), but cramp-like muscular pains still occurred on walking. The disease had lasted about five years without gangrene supervening.

Dr. W. ESSEX WYNTER showed a case of Methæmoglobinæmia of 12 years' standing. The patient was aged 45 years and had been under observation since March, 1902. She had been in the same state of cyanotic anæmia for 12 years, being originally considered to be suffering from Addison's disease. There was a general yellowish pallor, with lilac-coloured mucous membranes, associated with feebleness, constipation, anorexia, and occasional vomiting. The temperature was 100° F. and the pulse was from 74 to 96. A pulmonary systolic bruit existed while the patient was in hospital. The urine was normal. The blood was chocolate-coloured, making comparison difficult in the hæmoglobinometer; the colour was not altered by exposure to carbon monoxide; the red cells numbered 3,010,000; white cells, 7000; hæmoglobin, 50 per cent.; index, 0·74; lymphocytes, 22·6 per cent.; transitional, 2·8; hyaline, 1·6; polymorphonuclear, 71; eosinophile, 0·2; and mast-cells 1·8; the bacillus coli was not found in the blood.—After some discussion the meeting resolved that the case was to be investigated by a committee consisting of Dr. A. E. Garrod, Dr. F. J. Poynton, and Dr. J. H. Drysdale.

Dr. WYNTER also showed a case of Amyotonia Congenita. The patient was an infant, aged 15 months. She was admitted to the Middlesex Hospital on Sept. 21st, 1907, on account of general weakness and backwardness. The parents and brother and sister were quite healthy. The child had been attending for two months at the Hospital for Sick Children and was stated to be getting weaker and thinner. The striking feature in the condition was the flabbiness of muscles and freedom of movement in articulations, allowing of flexion and extension beyond normal limits, so that the toes could be made to touch the front of the leg and the fingers the back of the forearm, while the legs could be flexed up to the chin. The child could sit up and walk and was cheerful and intelligent. The face was not affected. The muscles of the limbs though flabby showed fair bulk and responded to voluntary impulses. They did not contract to strong faradism and moderate currents induced no pain.—The PRESIDENT said he had seen two cases but did not know their ultimate history.—After Dr. H. MORLEY FLETCHER had spoken Dr. WYNTER replied.

Dr. WYNTER also showed a case of Ascites cured by permanent drainage through the femoral ring. The patient was a man, aged 50 years, who was admitted to the Middlesex Hospital on July 11th, 1907. For a week there had been swelling of the abdomen and legs with slight jaundice. There was no evidence of cardiac disease, but the daily output of urine was only 15 ounces, and it contained a trace of albumin; the specific gravity was 1010. Purgatives, diuretics, and Canadian hemp were tried without effect. The ascites increased and on August 26th tension was relieved by removing 300 ounces of fluid. This was only of temporary benefit and on Sept. 23rd Mr. Sampson Handley made a small incision below the umbilicus and several pints of fluid escaped. An incision as for femoral hernia was then made and with the aid of one finger in the abdominal cavity the process of peritoneum was drawn down and split, and the edges were stitched right and left to maintain the opening. The wounds were then closed. Owing to some leakage at the femoral wound paracentesis was performed a week after operation. Some oozing from a stitch puncture in the thigh continued for about three weeks, showing that the communication with the peritoneal cavity remained open, but the ascites did not recur, and by Nov. 20th there was no perceptible fluid in the abdominal cavity. The patient had been walking about the ward for a fortnight and neither femoral hernia nor œdema of the leg had developed; indeed, the girth of the right thigh was an inch less than on the opposite side. In this case the femoral operation was performed deliberately for the cure of ascites with the object of draining the abdominal cavity into the tissues outside the abdomen, so saving repeated paracentesis and the removal of quantities of albuminous fluid and to enable the patient to get about.

Dr. PASTEUR showed a case of Anterior Poliomyelitis. The patient was a boy, aged 13½ years. The illness began in November, 1906, with pain in the abdomen and the thighs, and fever and delirium. Two days later there was loss of power in the lower limbs; the paralysis spread, and the mother noticed that the boy could not cough; the arms were not completely paralysed. On admission on the eighth day (Nov. 19th) there was flaccid paralysis of the lower limbs, the diaphragm was paralysed, the respiration was entirely thoracic, the abdominal muscles were paralysed, and the abdominal and epigastric reflexes were absent. The movements of the thorax were equal on the two sides but deficient; there was paresis of all the muscles of the upper limbs. No paralysis of the face, the tongue, the palate, or the pharynx was noticed. For ten days the condition was critical; artificial respiration was performed every two or three hours; inhalations of oxygen and hypodermic injections of strychnine were given frequently. The fever terminated by crisis on Nov. 30th and the condition began to improve. From March until the present time the condition had remained as follows: complete recovery of power in the upper limbs; considerable recovery of thoracic muscles; persistent paralysis of the muscles of the lower limbs.

Dr. F. J. POYNTON showed two cases of Thyroid Swelling in young girls. The first patient was aged 15 years. She was admitted into hospital with a large thyroid swelling, with marked tremor and nervousness. There was nothing in the family or personal history which threw light upon the illness. In character she had always been heavy and inclined to drowsiness and the swelling of the thyroid first commenced a year ago. The catamenia had not begun. The particular features of interest in this case were: that, apart from ocular changes, which were entirely absent, the condition was one of well-marked Graves's disease; considerable and general thyroid enlargement affecting the right lobe more than the left; very marked fine tremor of the fingers and hands; tachycardia, from 124 to 140 per minute; nervousness and flushing of the face; and slight rise of temperature on admission. The cautious use of thyroid increased the symptoms and was promptly abandoned. The age of the

patient and the combination of nervousness and mental dulness were remarkable, and the marked improvement from simple rest in hospital was pointed out, whereas three months out-patient treatment had been quite ineffectual. Within a few days of admission all tremor had disappeared and the thyroid and pulse-rate had steadily diminished since the date of entering the hospital, Nov. 15th, 1907. The second patient was aged 12 years. The interest of this case lay chiefly in the history. The patient had been under Dr. Poynton's supervision for nine years and came to him originally from Dr. Garrod who had treated her for cretinism as an infant. Six years ago the child appeared so natural that Dr. Poynton made two attempts to leave off the thyroid treatment. In both instances within six weeks the following symptoms appeared: a swelling in the neck, obviously the thyroid, mental dulness, slowness of speech, and enlargement of the tongue. The resumption of the thyroid caused the disappearance of all these symptoms. Four weeks ago the patient, who had been steadily treated ever since these attempts, came to Dr. Poynton at University College Hospital showing a definite thyroid swelling. There were no symptoms of Graves's disease. At present no increase had been made in the amount of thyroid given and the neck still showed the swelling. The diagnosis inclined to was partial cretinism, with compensatory enlargement of an inefficient thyroid to supply the lack of secretion when the outside supply was slowly cut off. This case appeared to throw light upon the cases of thyroid enlargement which reacted favourably to thyroid treatment and was in this respect an antithesis to the first case.

Dr. J. GRAHAM FORBES showed a patient, aged 34 years, with an Unusual Form of Gouty Deposit in the Left Olecranon Bursa. He was a beer-drinker. Gouty deposits had been noticed for four years. There were tophi in both ears. There was a much enlarged bursa over the left olecranon, containing fluid and a mass of chalk-like concretion. There was thickening about the left shoulder-joint and wrist and there were subcutaneous deposits in the fingers and thumbs of both hands. There was thickening of the synovial membranes of the left knee and ankle joints but there was no evidence of gouty deposits about the great toe joints.

Dr. H. BATTY SHAW showed a case of Bulbar Paralysis. The patient was a woman, aged 47 years. For 20 years she had had a large bronchocele and slight attacks of periodic huskiness of the voice. In February, 1903, there was cough of a "brassy" character, unaccompanied by any paralysis of the vocal cords, and probably due to pressure on the trachea; tachycardia and tremor of the hands were occasionally observed. In June, 1907, half the bronchocele was removed as the pressure on the trachea was increasing; it presented the microscopic structure of carcinoma. On July 8th the voice was almost completely lost; there were stridor and weakness of the left lower facial muscles. On the 15th there were pain and stiffness of the back of the neck. On August 21st atrophy of the right half of the tongue was noted. On the 28th there was diplopia. On Nov. 5th paresis of the sixth nerve on the right side, paresis of the right half of the palate, paresis and atrophy of the right sterno-mastoid and trapezius and aphonia were noted. She could swallow solids with difficulty; paresis of the left lower facial muscles and complete paralysis of the left vocal cord were noted and vomiting had recently occurred. The diagnosis lay between primary degeneration of the centres of the various nerves involved, possibly due to thrombosis, and a secondary deposit in and about the medulla. The latter view was supported by the presence of severe pain and stiffness of the muscles of the back of the neck. There was no history of syphilis.

Dr. SHAW also showed a case of Hepato-splenomegaly with Ascites. The patient was a child, aged three and a half years, who was noticed to be short of breath in June last. She was now easily tired and unable to walk far owing to shortness of breath. The abdomen was observed to be swollen on Nov. 22nd of this year and this had increased steadily. She was the eldest of three children. Both mother and father had had rheumatic fever and the mother had had one miscarriage since the birth of the youngest child. This child was breast-fed till eight months old and then was fed on boiled milk till solid food was given. There were no signs of tuberculosis or of syphilis. The liver was enlarged and the spleen could be felt easily until recently, when the ascites had increased. There was no albumin in the urine, nor were there signs of cardiac disease. The blood count was normal for a child of three and a half years, except that the percentage of hæmoglobin was only 64 and that a leucocytosis of 36,000 white corpuscles existed. Jaundice had not been observed.

## SECTION OF SURGERY.

*Complete Gastrectomy.*

A MEETING of this section was held on Dec. 10th, Mr. J. WARRINGTON HAWARD being in the chair.

Mr. B. G. A. MOYNIHAN read a paper on a case of Complete Gastrectomy, which is published at p. 1748 of this issue of THE LANCET.

Mr. W. MCADAM ECCLES said that he had a somewhat similar case two years ago. The patient, a woman, aged 46 years, had had symptoms of gastric trouble for the preceding three years. She was very thin and it was quite easy to palpate the swelling in the region of the stomach. The stomach, as judged by the specimen, bore a strong resemblance to that shown by Mr. Moynihan. There was a marked constriction between the pyloric and cardiac ends. There were no adhesions to be found and he considered it a case suitable for gastrectomy. So little of the cardiac end of the stomach was left that it was almost a complete gastrectomy. He proceeded in the same way as did Mr. Moynihan, ligaturing the vessels as far as possible and then dividing the duodenum. He also ligatured the right gastro-epiploic artery, turning the stomach over to the left side and getting well up to the cardiac portion. Then there arose the difficulty which Mr. Moynihan had so graphically shown might be overcome by traction, as to how to manage the suturing of the œsophagus to a portion of the intestine. He boldly cut through the cardiac portion of the stomach just below the œsophagus, and finally ligatured the vessels on that side, and was then able to bring the duodenum to the œsophagus, and he did an end-to-end suture between them. She did very well and was able to take solid food within three weeks and left the hospital in a month. She then died from what seemed to be secondary growths in the liver. No post-mortem examination was allowed and he was unable to see the results of the gastrectomy. The microscopical characters were so similar to those mentioned in the present case that he would not enter into them. The most interesting point seemed to be the method which Mr. Moynihan described of anastomosing between the distal end of the œsophagus and the first loop of the jejunum and that seemed a very practical and useful suggestion. It was only in a few cases that gastrectomy could be performed.

Mr. MOYNIHAN replied.

## SECTION OF LARYNGOLOGY

*Exhibition of Cases and Specimens.*

A meeting of this section was held on Dec. 6th, Dr. J. B. BALL, the President, being in the chair.

Dr. J. COUBRO POTTER and Dr. W. JOBSON HORNE showed a case of Adherence of the Soft Palate to the Pharyngeal Wall in a youth aged 21 years. It was generally considered that the case was one of lupus and that operation was not advisable.

Mr. ARTHUR H. EVANS exhibited a specimen of Leprosy of the Larynx.

Dr. HERBERT TILLEY showed a case of "Bridle" Formation on the Left Ventricular Band, the result of syphilis. He also showed a man, aged 46 years, with Granular Congestion of the Right Cord. There had been no improvement under mercury and iodide of potassium and there was a suspicion of malignant disease.—Sir FELIX SEMON thought that it was a case of unilateral simple laryngitis.

Mr. HAROLD S. BARWELL showed a case of Symmetrical Nodules on the Cords of a boy aged nine years.

Mr. LAWRENCE JONES showed a case of Laryngeal Gumma which had been uninfluenced by oral administration of mercury and iodide of potassium, but rapidly improved under intramuscular injections of benzoate of mercury.

Mr. ARTHUR J. HUTCHISON showed a boy, aged 15 years, with Bilateral Tumours of the Upper Jaw, reported microscopically as sarcoma, but unchanged over 12 months. The condition was more probably allied to leontiasis ossium.

Dr. P. WATSON WILLIAMS showed a man, aged 24 years, with Immobility of the Left Cord and Ulceration of the Left Ventricular Band.

Dr. CYRIL A. B. HORSFORD exhibited a woman from whose

Vocal Cord he had removed a Fibroma. He also showed an instrument designed to facilitate such operations.

Mr. W. J. CHICHELE NOURSE showed a case of Bilateral Frontal Sinusitis after operation.

Mr. C. A. PARKER and Dr. L. H. PEGLER exhibited two Sections showing Bleeding Polypus of the Septum together with the patients from whom they had been removed.

Dr. PEGLER showed the case exhibited at the last meeting with an Œdematous Fibroma of the Vocal Cord, the growth having been subsequently removed.

Dr. J. DUNDAS GRANT showed a case of Epithelioma of the Tonsil and a patient with Disease of the Maxillary Antrum after operation by the intra-nasal method.

## OPHTHALMOLOGICAL SOCIETY.

*Some Cases possibly Allied to Tay-Sachs Infantile Retinitis.—Exhibition of Cases.*

A MEETING of this society was held on Dec. 12th, Mr. R. MARCUS GUNN, the President, being in the chair.

Mr. E. NETTLESHIP described Some Cases possibly Allied to Tay-Sachs Infantile Retinitis. He suggested that the amaurotic family idiocy of Waren Tay and Sachs, although usually fatal in infancy or limited to children of pure Jewish origin, might sometimes be milder, allowing the child to live for several years or even to grow up, and that many families of Gentiles inherited more or less Jewish blood. He thought that cases such as those described by Dr. F. E. Batten, Mr. M. S. Mayou, and others, in which amblyopia with slight changes in the macular region came on a few years after birth and was sometimes associated with progressive cerebral degeneration, might be mild examples of Tay's disease. Also that the same might be true of certain cases of amblyopia counted as congenital, in which there was central defect in the visual field and sometimes nervous or mental failure but no tendency to early death; in the best marked of these cases there were colour blindness, often total and complete, and day blindness, but in the less severe ones there might be no colour defect and no dislike of strong light. All these forms of non-fatal amblyopia were, like Tay's disease, liable to run in families.

The following cases were shown:—

Dr. E. J. SMYTH: An Unusual Type of Cataract in which there was no history of injury other than a slight burn 25 years ago.

Mr. GEORGE COATS: Varicose Veins of Conjunctiva.

Mr. J. HERBERT PARSONS: Multiple Congenital Malformations in a child, including a squint, right microphthalmos, and a mass of fibrous tissue in the vitreous. The left eye showed tags of capsulo-pupillary membrane and coloboma of choroid and iris. There were congested patches and angeoid streaks in the retina.

Dr. P. C. BARDSLEY: Curious Corneal Opacity.

## SOCIETY OF ANÆSTHETISTS.

*The Status Lymphaticus in Relation to General Anæsthesia.*

A MEETING of this society was held on Dec. 6th, Dr. R. J. PROBYN-WILLIAMS, the President, being in the chair.

Dr. W. J. MCCARDIE read a paper on the Status Lymphaticus in Relation to General Anæsthesia. He said that in the times of our professional forefathers much importance was attached to temperament—e.g., to the sanguine, bilious, or lymphatic temperament—but nowadays we were so exact that the only temperament, diathesis, or status left was the one under consideration that evening, the lymphatic diathesis, and that this was a pathological entity. In turning to history on the subject, according to Griffiths, Plater in 1614 called attention to the fact that the thymus was enlarged in certain cases of sudden death; in 1723 Richat made the same observation, and Kopp in 1829 associated enlarged thymus with laryngo-spasm. Friedleben denied the common assumption that enlarged thymus could cause death by compression of the air passages. Dr. McCardie gave the credit of having directed into a right path the investigation of many hitherto inexplicable cases of death under chloroform to Paltauf, though Crawitz had previously noted the enlargement of the thymus gland in two fatal cases and had emphasised the possibility of a connexion between such enlargement and sudden death under chloroform. Paltauf collected a large number of cases of sudden death in adults which on post-mortem examination gave in an extreme degree characteristically similar proofs of the correctness of his theory. The combination of conditions found, and called the "lymphatico-chlorotic constitution," included an enlargement of the tonsils, of the lymphatic gland system, of the follicles at the base of the tongue, of the spleen, and lastly, an enlarged thymus gland which varied in size in different subjects; it most cases also there was narrowing of the aorta. Paltauf's first case was that of a girl, aged nine years, who sat up in bed and died suddenly. He also spoke of sudden death during bathing, &c. Dr. McCardie dealt with observations of sudden death made by Nordmann, Recklinghausen, Laquer, Pott, Kundrat, Ewing, Blake, and others, but stated that there had been small mention of sudden death in British medical literature. Since these observations many sudden deaths had been recorded of children, apart from anæsthesia, in whom post mortem had been found the symptom-complex of status lymphaticus. The subjects of the status, especially when young, were unusually subject to infectious diseases, to shock, or to fright. Dr. McCardie then dealt with the general results of post-mortem examinations which were tolerably uniform and very remarkable, characterised by an enlarged spleen with varying degrees of prominence of its follicles, by tumescence and hypertrophy of lymphatic glands in various regions (especially the mesenteric, retroperitoneal, and cervical), by noticeable prominence and multiplication of follicles at the base of the tongue and in the pharynx, by an enlargement of the tonsils and swelling of solitary follicles and Peyer's patches in the intestine, and by a dilated heart with extremely flaccid cardiac muscle. There were sometimes a contraction of the aorta and dark fluid blood. Frequency was next considered as were the records of Halstead, Hedinger, Elsar, Wolff, and the records of the Children's Clinic at Cratz. The very typical case recorded by Mr. Harvey Hilliard at the last meeting of the society was also mentioned. Of 30 cases of status lymphaticus or thymicus deaths during or after anæsthetics the records of which Dr. McCardie had examined the anæsthetic used was in 17 cases chloroform, in six cases ether, in five a mixture of chloroform and ether, and in two nitrous oxide. He could find no record of death under ethyl chloride. Records of deaths from morphine and local anæsthetics were given. The average age in 35 cases collected was 16 years, the youngest being six months and the oldest 55 years; 24 were under 20 years. All of Blake's seven cases were adults. Dr. McCardie then gave the notes of several cases of sudden death during chloroform anæsthesia in patients the subjects of the status lymphaticus. He also gave notes of cases of fairly young people who had given trouble both with chloroform and ether and in whom the status lymphaticus was suspected. He stated that the status was not infrequently found in several members of one family, mentioning abstracts from Hedinger, Hochsinger, Jacobi, and Blumer. He pointed out to anæsthetists the importance of diagnosis and said that so far as he had read not one of the cases of deaths under anæsthesia had been diagnosed beforehand as lymphatic. He dealt with the history and signs which should often enable them to diagnose the condition, the recognition of an enlarged thymus being the most difficult point.

Mr. HARVEY HILLIARD then briefly recapitulated the case which he had reported at the last meeting.

Mr. H. T. WIGHTMAN quoted seven cases from the Royal Infirmary, Sheffield: most of them were cases of sudden death apart from anæsthetics but two or three had had chloroform. In all the post-mortem changes were typical of status lymphaticus—viz., enlarged thymus, enlarged follicles in the intestine and spleen, and enlarged lymphoid tissue at the base of the tongue. In two cases also the thyroid was enlarged, the cellular elements being increased at the expense of the colloid material. Mr. Wightman thought that a diagnosis might occasionally be made by looking for enlarged lingual tonsils enlargement of the mesenteric glands, and enlargement of the thymus to percussion. He mentioned three cases in which a diagnosis had been made. Fraenkel diagnosed one case and advised against operation; in Vienna medical records a case was recorded in which the status was diagnosed; and in the Sheffield Infirmary Dr. A. E. Barnes, the house physician, diagnosed a case and advised against operation.

The discussion was adjourned until the next meeting of Feb. 7th, 1908.

# LIVERPOOL MEDICAL INSTITUTION.

*Exhibition of Cases and Specimens.*

A CLINICAL meeting of this society was held on Dec. 5th, Mr. FRANK T. PAUL, the President, being in the chair.

Amongst a large number of clinical cases shown were the following:—

Dr. T. R. BRADSHAW showed three adults suffering from Acute Anterior Poliomyelitis. The first patient was a man, aged 53 years. The onset was sudden, the patient's hands giving way while he was sitting on a gate. The paralysis was at first attributed to the fall. There was characteristic paralysis with wasting affecting the forearms and thighs. The second patient was a man, aged 28 years. After being ill for two days with what was supposed to be influenza he was found to have paralysis of one arm. His condition was characteristic. These two cases occurred within a week of one another and the patients lived in the same district, suggesting an infective source for the disease. The third patient was a woman, aged 35 years. Two years ago she was seized with sudden paralysis of the right leg, the left leg being also slightly affected. At present she suffered from foot-drop with coldness and blueness of the feet.

Dr. R. J. M. BUCHANAN showed a child who had suffered from Tuberculous Meningitis and recovered. After an illness lasting for four weeks and coma lasting for eight days 20 cubic centimetres of cerebro-spinal fluid were removed by lumbar puncture; the fluid contained lymphocytes but no meningococci were found. The symptoms were classical. An inoculation of $\frac{1}{10000}$th of a milligramme of new tuberculin was given. The child showed immediate signs of improvement and gradually recovered consciousness. Three weeks later the above treatment was repeated and was followed by uninterrupted recovery, the child being now quite intelligent and able to run about. Calmette's tuberculin reaction on the conjunctiva was positive.

Dr. BUCHANAN also described a case of Chloroma in a child aged four and a half years. The symptoms commenced with anæmia in July; there was right facial paralysis with pain in the right ear in October and exophthalmos followed. The orbital growth was proceeding rapidly. Characteristic blood changes were present, the leucocytosis increasing from 25,000 to 250,000 per cubic millimetre in a few days.

Dr. J. LLOYD ROBERTS showed the following cases: (1) A case of Chancre of the Scalp caused by the patient butting his head in a scuffle against the teeth of a man who had symptoms of secondary syphilis; (2) a case of Lead Paralysis which improved rapidly under treatment with iodipin after potassium iodide had been tried for some time without apparent benefit; and (3) a case of Transverse Myelitis, which improved to a certain extent under potassium iodide and mercury, and was now making more rapid progress with iodipin.

Dr. N. PERCY MARSH showed the following patients: 1. A boy, aged one year and nine months, who was admitted into the Children's Infirmary, Liverpool, on Nov. 5th, with a history of having had Meningitis with retraction of the head seven weeks previously. On admission he had marked "intention tremors" of all parts of the body. The cerebro-spinal fluid was turbid, reduced Fehling's solution, showed a large number of polymorphonuclear leucocytes, and a growth of staphylococcus aureus was obtained from it. There was no optic neuritis or atrophy of the disc. 2. A girl, aged eight years, with Insular Sclerosis. The symptoms were first noticed four years ago after a fall on the head. She now had typical intention tremor with nystagmus and scanning speech. There was no optic atrophy and the cerebro-spinal fluid was normal.

Mr. R. C. DUN showed the following patients: (1) a case of General Thyroid Enlargement in a girl, 12 years old, associated with tremors and rapid heart's action but no exophthalmos; (2) a case of Lymphadenoma; (3) a case of Meningocele and Accessory Auricles; (4) two cases of Congenital Deformity of the Hand, showing syndactylism, microdactylism, and congenital lateral deviation of the fingers; (5) two cases of Congenital Deformity of the Lower Extremities; and (6) a case of Ischæmic Contraction of the Muscles of the Forearm following Fracture of the Humerus.

Dr. H. LESLIE ROBERTS showed the following patients: 1. A case of Rodent Ulcer of the Nose of two years' duration caused by the x rays. 2. A case of Lupoid Gummata covering the whole of the front of the neck and a portion of the nose and upper lip; the resemblance to lupus was extraordinary but the disease was of only one year's duration. 3. Tuberculides in a woman, aged 47 years, involving the right upper eyelid, the cheek, and the upper lip; the disease was of three and a half years' duration. A sister of the patient died from consumption and the patient had had more than one "hæmorrhage." The lesions were multiple, discrete, and uniform in their objective characters and their mode of evolution. Each lesion presented the appearance of a slightly elevated convex spot of bluish-red colour. At the centre of each spot a slight amount of fluid exudate preceded quiet necrosis, the loss of tissue being followed by a minute depressed scar. 4. A case of Acquired Syphilis in a girl, aged 12 years. A rash covered most of the body. The chancre was on the lip and resembled impetigo. 5. A case of Multiple Lupus in a boy complicated by secondary inoculations.

Dr. G. G. STOPFORD TAYLOR and Dr. R. W. MACKENNA showed the following cases of skin disease: 1. Enchondroma Cutis in a female, aged 15 months. She was the fifth child in a family all of whom were healthy. In the skin on the outer side of the left thigh, the front of the chest, the back, the left side of the scalp, and the left forearm just above the wrist, there were plates of cartilage varying in size from one and three-quarter inches to the size of a split pea. Over these deposits the skin had a peculiar violaceous hue, and showed here and there a pearly deposit. The cartilaginous nature of the plaques had been confirmed microscopically and at points the cartilage which was lying in the true skin showed signs of ossification. So far as was known this was the first case of the kind that had been shown in England. 2. Psorospermosis Follicularis Vegetans (Darier's disease) in a woman, aged 32 years. The disease affected chiefly the neck, the upper part of the chest and back, and the arms. It had lasted for seven years. 3. A very severe case of Ichthyosis Nigricans in a boy aged 11 years. 4. Cases of Lupus showing Calmette's ophthalmo-reaction. 5. Folliculitis of the fingers and hands of 13 years' duration in a young woman. The tuberculous nature of the disease was confirmed by the presence of tuberculous glands in the neck. 6. A case of severe Papular Syphilis. 7. A case of Hypertrophic Lupus of six months' duration. 8. A series of 40 Wax Casts taken from patients suffering from different forms of skin disease.

Mr. J. BARK showed cases of the Complete Mastoid Operation and Heath's Conservative Method. The patients had been the subjects of fœtid middle-ear suppuration of from three to 12 years' duration. The results were excellent and the hearing after Heath's operation was most marked.

Cases were also shown by the PRESIDENT, Dr. N. RAW, Mr. C. T. HOLLAND, Mr. K. W. MONSARRAT, Dr. F. H. BARENDT, Dr. K. A. GROSSMANN, Mr. R. J. HAMILTON, Dr. A. N. WALKER, Mr. T. GUTHRIE, and Dr. J. E. MCDOUGALL; an Operating Table by Dr. W. BLAIR BELL; and Radiographs by Dr. D. MORGAN.

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FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held in the School of Medicine, Dundee, on Dec. 5th, Dr. James Rorie being in the chair.—Dr. G. T. Guild showed two patients after operation for Abscess of the Brain following Middle-ear Disease. The first was a boy, aged 10 years, who from infancy had suffered from an intermittent discharge from the right ear. Three weeks previously to the onset of the acute symptoms he got a blow on the head which was followed by headache, vomiting, and shiverings. On admission to the infirmary he exhibited all the symptoms associated with abscess of the brain along with a fœtid discharge from the ear. The radical mastoid operation was performed, all the carious bone was cleared away, the sinus was exposed, and further examination led to the discovery of an abscess in the cerebellum half an inch below the surface. This was opened, a gauze drain was inserted, and the cavity was plugged, after which he made an uninterrupted recovery. The second patient was a girl, aged 16 years, in whom the symptoms of cerebral abscess were marked by acute suppuration in the mastoid and the possibility of meningitis or sinus thrombosis. She was suddenly attacked with headache and severe pain behind the eyes, pain in the limbs, and high temperature—symptoms which pointed to an attack of influenza. Shortly afterwards tenderness and œdema developed over the left mastoid and pus came from the ear. After the mastoid was opened an abscess which was discovered in the cerebrum just above it

was drained and the girl made a good recovery.—Mr. D. M. Greig showed a specimen of Teratoma of the Testis removed from a child, aged 13 months. It was discovered some months after birth and consisted of a solid oval swelling of the testicle of the size of a small date. Microscopic examination revealed the presence of muscle, gland, nerve, cartilage, &c., the tissue of every organ in the body practically being represented in the tumour.—Mr. Greig also read a paper on Intermittent Claudication and gave notes of a case of this rare disease which he had met with in a man, 72 years of age. He was a healthy and an active man for his years and a great walker, but for 12 years had been subject to recurrent attacks of biliousness, coming on more especially after any undue exercise. In December, 1905, a severe bilious attack with diarrhœa was followed by pain and swelling of the right leg and thigh accompanied by pain without swelling in the left leg and in the region of the left hip; this pain persisted for several months and recurred after walking. As at no time was there any symptom indicative of arterial obstruction the condition was evidently produced by thrombosis in the right common iliac vein from which it had apparently spread to the inferior vena cava obstructing the venous return from the left ilio-psoas muscle. Thereafter intermittent claudication invariably followed prolonged use of the ilio-psoas muscle accompanied during the lameness with pain. Mr. Greig said that literature on the subject was scanty, that the condition was better known in veterinary than in human pathology, and that in both cases it was mostly in association with arterial changes and not limited to the veins as in the present instance.—Dr. R. C. Buist read a paper on the Use of Hypodermic Injections of Hyoscine and Morphine in the ordinary management of labour. He thought that $\frac{1}{150}$th of a grain of hyoscine and $\frac{1}{4}$th of a grain of morphine were the best proportions, but they could be varied in amount according to the requirements of individual patients, it being necessary in those who bore the pains badly to increase the amount of morphine. The effect was generally produced in about 15 minutes and fully developed in an hour. After the injection the patient becomes drowsy, lying quiet during the intervals of pains, waking up when they come on but experiencing no actual pain, frequently falling into sound sleep during which the contractions go on and labour proceeds to a natural termination, the patient remaining in a state of semi-consciousness.—Dr. A. Don read notes on three cases of Stricture of the Œsophagus in which he spoke of the value of the x rays for the diagnosis of the exact site of the stricture.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on Dec. 11th, Dr. Justin M. McCarthy, the President, being in the chair.—Dr. J. Miller showed naked-eye and microscopic preparations from a case which was taken in dead to the General Hospital. The man was aged about 37 years. He was observed to fall in the street bleeding profusely from the mouth. No history of the case was obtainable except that he had for some time past been suffering from pulmonary symptoms. The trachea and bronchi were filled with blood-stained froth; the stomach was full of liquid blood. At the bifurcation of the trachea and extending down the left bronchus there were several nodules varying in size. Some of these had broken down to form ulcers with raised margins. In the base of one of the largest of these ulcers one of the left bronchial arteries was found coming directly from the aorta from which the bleeding had evidently originated. The left lung showed a condition of interstitial pneumonia. The arteries of the lung showed in many instances endarteritis obliterans and there were numerous miliary gummata. There was no waxy disease in the lung itself or in the air passages. The spleen, liver, and kidneys showed an advanced condition of amyloid disease. In the liver there were several depressions of the capsule, on cutting into which there were found clear grey areas which were apparently gummata but on microscopic examination proved to be masses of waxy material. The presence of waxy disease and the occurrence of endarteritis both pointed to the condition being one of syphilis. Such syphilitic ulceration of the bronchi is probably extremely rare and as a cause of fatal hæmoptysis is still rarer.—Mr. L. P. Gamgee showed a man, aged 50 years, who had for three months suffered from an Ulcer on the Tip of the Tongue. The ulcer was rather smaller than a threepenny-piece and had an irregular outline and undermined edges. The surface was covered partly by flabby-looking pale granulations. There was no induration of the base or edges of the ulcer. Till a fortnight ago the ulcer had been very painful and tender but the pain had become much less under the local use of 1 per cent. solution of chromic acid. There were no enlarged glands. The patient had well-marked pulmonary tuberculosis at the right apex and had recently suffered from hæmoptysis. Mr. Gamgee had formed the opinion that the ulcer was tuberculous in nature and stated that he proposed to treat it by excision of a V-shaped piece of the tongue.—Mr. H. Gilbert Barling and Dr. A. Stanley Barnes showed a patient after successful removal of a Sarcoma of the Frontal Lobe of the Left Cerebral Hemisphere.—Dr. T. Stacey Wilson showed: 1. A woman who had been cured of severe Spasmodic Torticollis involving most of the muscles concerned in the rotation of the head to the right, coming on as the result of a blow from a football. 2. A very severe case of Writer's Cramp in a school teacher. Both cases were treated by means of rhythmical exercises as already described.[1]—Dr. George Saint Johnston showed a case of Transposition of Organs in a healthy, well-developed boy ten years old. The heart was situated on the right side of his chest and the liver was on the left side of the abdomen. He had never experienced any inconvenience but had noticed his heart beat on the wrong side after violent exertion.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 4th, Dr. S. Moritz, the President, being in the chair.—Dr. A. T. Wilkinson reported a case of Splenomegaly associated with Polycythæmia.—Mr. Burgess described two cases in which Uretero-pyeloplasty had been performed. The first case was that of a female, aged 32 years, with a large hydronephrosis which was found to be dependent upon a tight stricture at the junction of the pelvis of the kidney and the ureter, of congenital origin. A longitudinal incision one inch long was made through the constriction and this wound was sutured up in the transverse direction with fine catgut. Ten months afterwards the kidney was of normal size fixed to the loin and the patient was free from trouble. The second case was that of a female, aged 21 years, who ever since the age of three years had had aching pains in the lower part of the back, equally marked on both sides, and for several years had also had pus in the urine. A cystoscopic examination showed that the pus came from the left ureteric orifice. The left kidney was exposed and found to be in a condition of pyonephrosis, with three small calculi lodged in the lowest dilated calyx. There was a constriction at the junction of the renal pelvis and ureter, which admitted only the very finest probe. This was treated as in the first case. At the present time (12 months after operation) the kidney was small and fixed to the lumbar wound. The urine was very much clearer than before but still contained a little pus. The old pains had disappeared.—Dr. Orr showed specimens of the Degeneration of the Cranial Nerves in a case of Cerebro-spinal Meningitis. The pons and medulla were treated by Marchi's method and sections cut in series. The reaction of degeneration was present only in the intra-medullary portion of certain cranial nerves, viz.: third, fourth, fifth, sixth, seventh, and eighth. The sensory portion of the fifth nerve showed the greatest degree of degeneration and of a type indistinguishable from Wallerian change; in the other nerves there was a slight degree of primary degeneration of the myelin. The more advanced degeneration in the fifth sensory root showed its earlier implication in the morbid process and suggested the theory that should the causal organism have its habitat in the buccal or nasal mucous membrane it could invade the brain along the nerve lymph stream.—Dr. N. C. Haring gave a communication on Asthma and Nasal Disease. After a brief consideration of the causation and symptoms particular attention was devoted to a series of 25 cases in which various nasal lesions had been found. A large proportion of these cases, after ordinary treatment had been tried without avail, was cured or relieved by intra-nasal treatment or operation. In conclusion, the necessity of seeking for causative sources of peripheral irritation in cases of asthma was strongly urged.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 5th, Dr. G. Thomson, the President, being in the chair.—Dr. W. S. Porter opened a discussion on the Treatment of Acute Rheumatism. He expressed himself in favour of moderate doses of sodium salicylate combined with alkalies. He did not think the salicylate prevented relapses or cardiac complications. Aspirin was useful in some cases. Serum

[1] Brit. Med. Jour., July 20th, 1907.

treatment was at present in the experimental stage and was so far of no practical use. In regard to local treatment to the affected joints he advised warmth and, in obstinate cases, blisters. To prevent or to minimise heart lesions the chief indication was rest, not only during the attack but continued for at least three weeks after convalescence was established. Blisters over the præcordia were often of service. The diet should consist of milk and farinaceous food for some time after the subsidence of the pyrexia. Many heart lesions would be avoided were the slight cases of so-called subacute rheumatism energetically treated and he insisted on the importance of treating such cases with as much care as those of a more acute nature.—Dr. D. Burgess drew attention to the necessity of going into small details of treatment in order to make the patient comfortable. He advised great care in the giving of salicylates where nephritis was present. —Dr. J. W. Martin gave his experiences with perchloride of iron and potassium iodide. In some cases they were of great service.—Dr. Arthur J. Hall thought it necessary to push the salicylates, giving them at frequent intervals. He showed temperature charts to illustrate this point. He had never seen any untoward effects from the use of salicylates. —Professor J. M. Beattie thought that eventually they would have an antitoxin for rheumatism.—Dr. J. Sorley thought that large doses of salicylates were necessary and were well borne.—Dr. Hall showed a case of Erythema Iris affecting the palms of the hands. The patient had had two previous attacks during the last few years.—Dr. George Wilkinson showed a case of Chancre of the Nasal Septum in a young woman, probably inoculated from the finger. The spirochæta pallidia was demonstrated in a section of the chancre.—Mr. W. S. Kerr showed a man with a small Gumma of the Bridge of the Nose. He had contracted syphilis a year ago. There was a large perforation of the cartilaginous septum, not involving the bone.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 11th, Dr. W. J. Tyson (Folkestone), the President, being in the chair.—Dr. W. Edgecombe (Harrogate) read a paper on Blood Pressure in Spa Practice, the purpose of which was to show the utility of making observations of blood pressure as an aid to diagnosis and as a guide to hydrotherapeutic treatment. After pointing out that most cases going to spas suffered from chronic diseases of nutrition in which blood pressure changes afforded some indication of the state of tissue nutrition he discussed the following conditions in relation to blood pressure: arterio-sclerosis, hyperpiesis, gout, fibrositis, heart disease, anæmia, and the menopause, giving cases in illustration of his views. He concluded with a plea for the routine examination of blood pressure in spa practice as affording more precise information than could be obtained by the digital method alone.—Dr. Leonard Williams, in support of Dr. Edgecombe's views, recalled Sir T. Clifford Allbutt's dictum to the effect that it was as absurd to discuss blood pressure in the absence of an instrument as it was futile to discuss temperature in the absence of a thermometer. In further support of Dr. Edgecombe's views he insisted upon the existence of high blood pressure as a functional manifestation which was altogether independent of granular kidney or other structural disease except in so far as its continuance tended to produce these conditions. He discussed the spa and climatic treatment and concluded that such benefits as were peculiar to this form of treatment resided rather in the greater readiness of patients to obey orders at health resorts than in any properties inherent in the waters, more especially at British spas.—Dr. George Oliver (Harrogate) discussed the blood pressure in gout and the menopause and gave an outline of his recent observations on the diagnostic value of the armlet method in arterio-sclerosis. He demonstrated his improved hæmomanometer.—Dr. Harry Campbell considered that it was possible to estimate the radial blood pressure by the finger. He referred to the function of the muscular media in preventing vascular stretching.—The discussion was adjourned to Jan. 29th, 1908, when it will be reopened by Dr. Fortescue Fox.

HUNTERIAN SOCIETY.—A meeting of this society was held on Dec. 11th, Mr. F. Rowland Humphreys, the President, being in the chair.—Dr. O. K. Williamson showed a woman, aged 50 years, who gave a history of wasting and pain in the back for 18 months. She had a very high arterial blood pressure (260 millimetres), marked arterio-sclerosis, together with extreme hypertrophy of the left ventricle; there were no signs of disease of the aortic valves. In the right upper abdomen was a large soft moveable tumour. The urine was increased in amount and contained albumin. The points of interest were: (1) the extreme degree of cardiac hypertrophy; and (2) the diagnosis of the abdominal tumour. The case was looked upon as one of acquired cystic disease of the right kidney, general arterio-sclerosis, and hypertrophy of the left ventricle.—Mr. Hugh Lett showed a boy, aged 12 years, who had suffered from a Myeloid Sarcoma of the Thigh which was freely excised four years ago and had not recurred. He also showed a woman, aged 35 years, with a Tumour of the Sternum of doubtful nature. She had had four healthy children and was still suckling the fourth. There was no history or evidence of syphilis or of tubercle. The tumour was firmly attached to the sternum, was hard at the circumference, and soft at the centre. It had been noticed for two months and was growing rapidly. The most probable diagnosis was sarcoma.—Dr. Purves Stewart asked whether Calmette's test had been applied.—Dr. W. Langdon Brown said that in order to make Calmette's reaction trustworthy the solution should be prepared at frequent intervals from the dry tuberculin. He also drew attention to the fact that tubercle might be present in another part of the body than that suspected and thus a positive reaction might be obtained, although the part under investigation was unaffected by tubercle.—Mr. Lett then showed a woman, aged 82 years, with Atrophic Scirrhus of the Breast.—The President showed a patient whom he had treated for Rodent Ulcer by means of zinc ionisation. The ulcer had been cured by this means, though not so quickly as was often the case. In some instances, where the ulcer was small, one sitting had sufficed to effect a cure.

EDINBURGH OBSTETRICAL SOCIETY.—A meeting of this society was held on Dec. 11th, Professor William Stephenson, the President, being in the chair.—Dr. A. Dingwall Fordyce read a paper on the Practice of Artificial Infant Feeding, in the course of which he laid down the following general principles to serve as the basis for treatment: (*a*) Definite, distinct, and minute instructions as to diet; (*b*) *gradual* increase of food constituents in healthy babies; (*c*) *sudden* and thorough diminution of food constituents in the cases of infants suffering from digestive disturbances, more particularly where this condition is an acute one; (*d*) in the cases of infants who have previously suffered from digestive disturbance increase of food constituents both in amount and nature must be extremely gradual; increase in the amount and quality of a food must *never* take place simultaneously; and (*e*) alteration of the diet is as a rule to be brought about by immediate stoppage of the diet in use and the commencement at the lower rungs of the nutritional ladder, or by the gradual replacement in each feed of the diet in use by the diet recommended. He then proceeded to discuss the practical consideration of the diet in connexion with the following common types of infants: 1. Healthy baby, hand-fed from birth. 2. Healthy baby, weaned at different ages. 3. Organically healthy baby at varying ages, previously improperly fed: (*a*) displaying no markedly abnormal symptoms; (*b*) ill-nourished, &c., no marked diarrhœa or vomiting; and (*c*) diarrhœa and vomiting, (1) acute and (2) chronic. 4. Baby, previously properly fed, suffering from acute digestive disorder. 5. Organic disease or acute infective condition.—The President, Dr. James Carmichael, Dr. J. W. Ballantyne, Dr. Elsie M. Inglis, Dr. J. S. Fowler, Dr. J. Ritchie, and Dr. C. M. Pearson made remarks on the paper and Dr. Dingwall Fordyce replied.

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AT the last meeting of the Newport (Mons.) board of guardians the salary of Mr. D. E. Thomas, medical officer for the Christchurch district, was increased from £90 to £120 per annum.

THE NORTH STAFFORDSHIRE INFIRMARY.—On the occasion of the annual general meeting of the governors of the North Staffordshire Infirmary the medical board made an important recommendation. After pointing out that the number of in-patients remained at practically the usual level, the board drew attention to the continually increasing work of the out-patient department and urged the desirability of putting a monetary value on out-patient recommendations. The medical board made the recommendation because it thought it desirable that there should be some relationship between the amount of money subscribed and the number of patients treated. If the plan recommended is adopted it may solve some difficulties and possibly raise others.

# Reviews and Notices of Books.

*The Chemical Investigation of Gastric and Intestinal Diseases by the Aid of Test Meals.* By VAUGHAN HARLEY, M.D. Edin., and FRANCIS W. GOODBODY, M.D. Dub. London: Edward Arnold. 1906. Pp. 261. Price 8*s.* 6*d.* net.

THIS work is a striking proof that modern medicine is advancing along scientific lines. It deals for the most part with chemical methods which the authors have employed with more or less useful results for the last 12 years. Bacteriology is left entirely alone and only cursory mention is made of microscopic appearances. In functional diseases of the stomach the true clinician will call in the aid of the stomach pump and chemical tests. In organic diseases of the stomach chemical analysis is not nearly so important but in all cases the stomach analysis is to be regarded as an aid in making a more careful and detailed diagnosis. The number of dyspeptics who suffer from functional disturbance of the stomach is out of all proportion to the number of those who suffer from structural diseases of the stomach. The investigation of intestinal diseases is more complicated, as fixed diets of known composition have to be given, and the authors attribute great importance to a study of the stools.

Part I. deals with Diseases of the Stomach, about 40 pages being devoted to the methods of obtaining and analysing the gastric contents. Kussmaul was the first to use the stomach pump as a means of obtaining the gastric contents for clinical diagnosis. The authors give the reference to Kussmaul's well-known paper but not the date. The date of this paper in the *Deutsches Archiv für Klinische Medicin* is December, 1869, although Kussmaul, then professor in Freiburg, had in 1867 used this method with success in dilatation of the stomach. Following on this, in 1893, Ewald recommended the use of test meals. Several varieties of test meals are given. Detailed methods are described for testing the acidity of the gastric contents, total and volatile acidity, and qualitative and quantitative methods for the recognition of hydrochloric acid, lactic, butyric, and acetic acids. The dimethyl-amido-azo-benzol test for hydrochloric acid is recommended as the most easily applied test in common use and it is the most certain in reaction. Then follows an account of the mode of examination of the gastric ferments by the usual well-known methods. The characters of various forms of gastritis are given and then four cases of chronic catarrh in alcoholic subjects are related. The results, the authors remark, if confirmed by further observers, will be of value in helping to diagnose chronic gastric catarrh of alcoholic origin. It is, however, just possible that other circumstances may point the way more surely than chemical analysis. Further observation is needed in these cases. As to gastric ulcer, hæmatemesis may be regarded "as the most important sign and unless it is present or the history of a previous hæmorrhage has been obtained it is difficult to diagnose a case as one of gastric ulcer." Hydrochloric acid is present in large quantities, varying from 0·4 to 0·42 per cent., while the carmine fibrin test shows a tendency to increased rapidity of digestion. In carcinoma of the stomach much depends on the situation of the tumour—e.g., in the cardiac or pyloric end. The total acidity as a rule is decreased but in some cases, especially where the carcinoma has followed upon gastric ulcer, no decrease in total acidity may be found. The consideration of secretory neuroses and allied topics and disturbances of the motor activity of the stomach closes Part I. (p. 92).

Part II. is devoted to Diseases of the Intestine. Here great stress is laid on the test meals to be employed—e.g., milk, mixed and meat diet, but above all upon a thorough examination of the stools, a subject which apparently for æsthetic reasons has been very much neglected by medical men in general. Strasburger and Schmidt's treatise "Die Faeces des Menschen" is the best known work on this subject. The main point is that under pathological conditions it is absolutely essential to have some fixed diet. As showing the importance attached by the authors to this subject about 80 pages are devoted to its study under the following heads: quantity, colour, consistency, odour, macroscopic and microscopic examination, chemical examination for reaction, water, solids, nitrogen, albumin, peptone and mucus, fats, sugars, phenol and its allies, bile and blood.

Under the head of Motor Power of the Intestine diarrhœa and constipation are fully considered (pp. 171–95). To determine the mobility of the intestine that of the stomach must, of course, be first investigated. With the x rays and a diet well mixed with subnitrate of bismuth Sicard and Ingroit in 1903 found that food took seven hours to pass along the small intestine to the ileo-cæcal valve, 14 hours to pass along the cæcum and ascending colon, and for the rest of the large intestine a further period of three hours. The question as to whether the large or small intestine is responsible for delay cannot be settled by any method at present known which is applicable to ordinary practice. As to intestinal carcinoma, in its early stages it produces practically no alteration in the fæces; indeed, until it has begun to ulcerate nothing pointing to malignity of the growth can be detected in the fæces. Even chemical analysis on different diets appears to be of little use. The other subjects dealt with are intestinal dyspepsia, catarrh, ulceration and atrophy, enteritis, colitis, sprue, and intestinal concretions.

Although the practitioner may not be able to carry out such methods as are set forth he will learn much from a careful perusal of this volume.

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*Manual of Midwifery.* By W. E. FOTHERGILL, M.A., B.Sc., M.D. Edin., Lecturer in Obstetrics at the Victoria University of Manchester. With double coloured plate and 103 illustrations in the text. Fourth edition. London and Edinburgh: William Green and Sons. 1907. Pp. 488.

IN its fourth edition this book maintains its chief characters unaltered. The author is to be congratulated on having even diminished its size to a slight extent; the matter which in former editions was incorporated in an appendix has now been brought into the text; the whole is said to have been revised and a number of new illustrations have been added. The index contains no reference to chorion-epithelioma or vesicular mole, nor do we find any mention of pubiotomy either in it or, indeed, in the body of the work. The author has altered his views as to the merits of Bossi's dilator. He says "that most authors are of opinion that the instrument is successful in all classes of cases where artificial dilatation is required." This, we think, is hardly a satisfactory statement of the advantages and disadvantages of this instrument. It certainly is useful and valuable where the cervical canal is obliterated, but with an unobliterated canal its use is attended with a great deal of danger. This should be pointed out, as it certainly is not an instrument to be used by anyone but a skilled obstetrician. At the present day it is important that much stress should be laid upon the large amount of information which can be gained by abdominal examination and the little necessity there is in many cases of normal labour for more than one vaginal examination, or at the most two examinations, to be made. The sentence, "it is not a general custom to include the abdomen in the first examination of a parturient woman, but it should be done when possible," hardly expresses the best teaching on this matter at the present day. In every instance the abdomen should be examined as carefully as the vagina and not nearly enough stress is laid on this point

by Dr. Fothergill, nor does he describe sufficiently fully the large amount of information which such an examination can yield. The importance of wearing rubber gloves in all cases of labour is hardly mentioned. In discussing the treatment of the uterus in a case of sapræmia in a parenthesis it is said that the operator's hands should be protected by rubber gloves but the details of their general use are not mentioned. The book retains its good features but we think it might have been brought up to date more thoroughly.

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*Anatomische, Physiologische, und Physikalische Daten und Tabellen.* By Professor H. VIERORDT. Third edition. Jena: Gustav Fischer. 1906. Pp. 616. Price 16*s.*; bound 17*s.* 6*d.*

THE first edition of this compendium of data relating to facts anatomical, physiological, and chemical appeared in 1888 and the second in 1893. The third edition is replete with data and tables on every imaginable subject—on the anatomical side, from the length of the body to comparison between the size of the head in the two sexes; on the physiological, from blood to the German death-rate; and on the physical, from temperature scales to electrical resistance. There are even additional details on climate, incubation period of diseases, and a dozen more subjects. Practically any data as to measurements useful to medical men are to be found in this work of reference. It is more than a ready reckoner and must have entailed unremitting labour in its compilation, more especially as in most cases the source of the information is stated. It is a work of reference that must prove of great value to all who wish to refer to standard data on almost all questions of size, measurement, and composition of organs and allied subjects. It is a most useful work which should be at hand in every anatomical, physiological, and pathological laboratory.

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*Manual of Bacteriology.* By ROBERT MUIR, M.A., M.D. Edin., F.R.C.P. Edin., Professor of Pathology, University of Glasgow; and JAMES RITCHIE, M.A., M.D. Edin., B.Sc., Superintendent of the Royal College of Physicians' Laboratory, Edinburgh; formerly Professor of Pathology in the University of Oxford. Fourth edition, with 171 illustrations. London and Edinburgh: Young J. Pentland. 1907. Pp. 605.

To discuss the general scope and character of this book, which has now reached its fourth edition and which has been established for so many years as the chief English text-book on bacteriology for the medical student and practitioner, is quite unnecessary. It would be difficult to find a work which more completely fulfils its purpose and we are grateful to the authors for never forgetting that, though themselves experts in bacteriology, they are still medical men writing on this science in relation to medicine. Much new matter has been, not simply added, but skilfully incorporated in the text and yet the book has not become unduly bulky; indeed, though there are some 50 additional pages and about 20 new illustrations the size of the volume is slightly reduced, apparently by the use of somewhat thinner paper. We have had occasion before to comment on the excellence of the illustrations and, considering the conditions, the admirable way in which they are reproduced; in this edition the impressions do not seem to be quite so good and sharp as in those of earlier date.

During the five years which have elapsed since the third edition was published many very important advances have been made in bacteriology, and these all find a place in the work. In the earlier part of the book, in which methods are dealt with, instructions for the preparation of several media (especially those for the discovery of the bacillus typhosus) have been introduced, and Wright's methods for counting dead and living bacilli in cultures are added. The section on the Fermentation of Sugars by Micro-organisms has been enlarged and is now treated on the basis of the composition of the carbohydrates as revealed by E. Fischer's researches.

Since the last edition the subject of syphilis has undergone much change and this has necessitated the introduction of a short but sufficient section on the spirochæta pallida, on the methods required for its demonstration, and on the work of Roux, Metchnikoff, and others on the inoculability of the disease. The methods which have been devised for the estimation of opsonins and allied substances in serum, together with a short account of the treatment of various diseases such as tuberculosis and sepsis by means of vaccines controlled as to their dosage by observations of the opsonic index, now find a place in the book. Recent advances have required, too, a change in the treatment of the subject of bacterial toxins.

In the systematic section the researches of Gordon, Andrewes, and Horder on the streptococci and staphylococci have been added. Epidemic cerebro-spinal meningitis has during the past few years assumed considerable importance and much work has been done in connexion with the disease and the microbe by which it is believed to be caused. This is reflected in the increased importance given to the consideration of the diplococcus intracellularis. The important work of Marie and Morax and Meyer and Ransom on the toxin of the tetanus bacillus and its bearing on the question of immunity is discussed. In the section on Plague the recent work on the part played by animal parasites in the spread of this disease, by which English observers confirmed the work of Simond, has been incorporated. The new African tick fever is described, while the now discredited bacillus icteroides has disappeared and the section on the relation of the mosquito to yellow fever has been lengthened.

It is impossible to deal with individual alterations and additions to the chapter on Immunity but this has been extensively altered and revised and much recent work, including that of one of the authors, has been incorporated. This has always been a satisfactory section of the book and it still affords one of the best balanced accounts of the subject with which we are acquainted. A new appendix has been added in which are treated those most important infections caused by the pathogenic trypanosomes. The book is well and accurately printed.

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## LIBRARY TABLE.

*Roengten Rays and Electro-Therapeutics (with chapters on Radium and Phototherapy).* By MIHRAN K. KASSAHIAN, M.D., Director of the Roentgen Ray Laboratory of Philadelphia Hospital, &c. London and Philadelphia: J. B. Lippincott Company. 1907. Pp. 545. Price 15*s.* net.—The author of this book explains its purpose and features in the preface. Its object "is to present clearly and concisely the more important facts pertaining to electro-therapeutics and the Roentgen rays." The initial portion of the work is devoted to the subject of electro-therapeutics and here, as in other parts of the book, the introduction of debatable questions as well as of mathematical formulæ has been carefully avoided. The larger section of the book is given to an exhaustive treatise upon the whole subject of Roentgen rays. Full attention has been given to the study of apparatus, the author firmly believing that this is essential if uniformly satisfactory results are to be obtained. The question of x ray dosage is dealt with very thoroughly, the absence of any standard of x ray measurement making it difficult or impossible to dismiss the subject with any brief notice. The various modifications in technique—spelt "technic" in America—called for in radio-diagnosis are fully described, a specially useful

chapter being set apart for dental skiagraphy. The localisation of foreign bodies comes in for a full share of attention. The author here illustrates his own modifications for localising foreign bodies in the eye and he is very strongly in favour of the stereoscopic method. The concluding chapters are devoted to radium-therapy and phototherapy. These chapters are not meant to be exhaustive but probably all that is definitely known thereof is here stated as briefly as the subject will permit. The book is well got up and well illustrated and its moderate price is the least of its good features.

*International Clinics: A Quarterly of Illustrated Clinical Lectures and especially Prepared Original Articles on the Various Departments of Medicine, by Leading Members of the Medical Profession throughout the World.* Edited by W. T. LONGCOPE, M.D., Philadelphia, with the collaboration of other authorities. Vol. III. Seventeenth Series. 1907. London and Philadelphia: J. B. Lippincott Company. Pp. 296.—In the volume under review Dr. D. Edsall contributes in the opening lecture the practical and theoretical considerations concerning Dietetics. The physician should, he says, first find out whether the patient needs his diet altered at all and next whether the proper amount and kinds of food are taken; then other points must be considered, such as the calorific value of the diet. The whole article is a very suggestive one. Dr. Albert Robin next deals with the Treatment of Pneumonia and especially of that by the action of metallic ferments, such as gold, silver, platinum, palladium, and manganese. He reports 53 cases with six deaths, or the low percentage of 11·32. The ferments are administered hypodermically in doses of 10 cubic centimetres. Dr. J. W. Wainwright writes of Mechano-Therapy and his article contains a very good *résumé* of the methods of applying massage and of the indications for this method of treatment. Dr. E. S. Bullock follows with an article on the Curability of Tuberculosis and his experience has taught him that a very large proportion of the incipient cases, under good conditions in a good climate, do really recover; of these cases he finds about 20 per cent. relapse later. In moderately advanced cases, 20 per cent. of apparent cures, and in the far advanced cases only 11 per cent. of apparent cures are obtained. He concludes by pointing out that it is all-important to get the tuberculous patient under observation and treatment in the very earliest stages of the disease. Dr. William B. Stanton contributes an article on the Blood Pressure in Tuberculosis which gives evidence of an immense amount of work. We next find the remarks of Dr. William Henry Porter on Two Cases of Primary Carcinoma of the Liver, which are illustrated by some excellent plates, and the lecture is furnished with a valuable bibliography bearing on the disease. Dr. David Sommerville treats of Gastritis. This term is often loosely used to include not only the inflammatory conditions of the stomach but also a number of purely functional affections in which the characteristic features of inflammation are absent. The author's article deals only with those cases in which the latter are present. He treats lucidly of the derangement of secretion and of motility, of the toxic products of carbohydrate and protein decomposition, and of the clinical picture of the disease. In the treatment he recommends first of all total abstinence from all solid food and the least possible liquid for from 36 to 48 hours. If then the symptoms have not abated rectal enemata should be given, and one excellent form is of fresh milk, the yelk of fresh eggs, with some salt and red wine. Drugs are contraindicated unless persistent vomiting is present, which is best treated by morphine hypodermically, mustard plasters to the epigastrium, ice, or, if these fail, by a mixture of bismuth, cocaine, and menthol. The author states, however, that washing out the stomach and lower colon and rectum with a weak solution of boric acid and thymol is thoroughly effective in 99 per cent. of the cases of severe vomiting. Dr. Raymond Wallace, in an article on the Salient Factors in the Estimation of Renal Disease, concludes that the points to be noted by the physician are the persistent character of the albumin, the quantity and persistence of the casts, but the most trustworthy prognostic data are afforded by the presence or absence of a normal ratio of excretion of normal urinary constituents through the measurement of the 24 hours quantity and its specific gravity. The medical section of this volume is completed by a well reasoned lecture on General Abdominal Enlargement, with special reference to hepatic cirrhosis, by Dr. Mark A. Brown. The various other departments of medicine are well represented. There is a notable article by L. Loeb on the Inoculability of Tumours and the Endemic Occurrence of Cancer, which is illustrated by some very good plates; while Dr. A. J. Hall writes a short practical account of the beneficial result obtained in perforating ulcer of the foot by treatment by the internal administration of potassium iodide, strapping with mercurial plaster, and a daily foot-bath of hot bichloride solution. Space forbids us to note more fully the various remaining articles in this volume which fully keeps up the reputation of its predecessors.

*Medical Musings, Grave and Gay, 1850–1907.* By L.R.C.P.E. London: William Stevens, Limited. Pp. 68.—The Edinburgh Licentiate has concocted an amusing farrago of reminiscences on a great variety of subjects. There are medical stories; an account of a young tiger, with a delightful photograph of the said tiger being brought up "on the bottle"; an account of Carlsbad written by an Anglo-Indian relative of the author; notes on golf, on Spezia, on Babu English, and on cigarettes. We congratulate the Licentiate on his hobby for collecting and upon the old oak which he has acquired. He says at the end of his book that he has written it "quod potui, non quod volui," and with this remark, which was also a favourite of a greater artist than he—namely, Jan Van Eyck—we may leave him.

## JOURNALS AND MAGAZINES.

*The Edinburgh Medical Journal.*—In a clinical lecture published in the December number of this journal Dr. R. W. Philip emphasises the value of percussion of the apices of the lungs during both inspiration and expiration, which he calls tidal percussion, as a measure of their physiological efficiency and thereby of their condition of health or disease. Mr. A. Logan Turner continues his discussion of mucocele of the accessory cavities of the nose and advocates an external operation as most generally applicable and the establishment of a large opening between the sinus and the nose. Dr. Alexander Haig criticises Fletcherism as a mode of life and ends with an affirmation of his well-known creed, "Great is uric acid, the source of all ills." Dr. Halliday G. Sutherland records a case of rapid pulmonary tuberculosis with pulmonary hypertrophic osteo-arthropathy in a child, aged six years, and Mr. Alexander Miles gives a *résumé* of some recent foreign literature on the surgery of the prostate.

*The Dublin Medical Journal.*—That Ireland is the best possible land for a medical man to live out of would seem to be the gist of an introductory address delivered by Dr. James Craig and published in the November issue of this magazine. The latter part of the address is devoted to a consideration of some points of medical ethics and etiquette, chiefly elementary in nature. Dr. R. S. Oldham continues his study of sleep which he regards as a period of internal assimilation by the nerve cells during which they show diminished excitability to external stimuli.

*The Scottish Medical and Surgical Journal.*—The December number of this journal contains two valedictory addresses, one delivered before the Edinburgh Medico-Chirurgical Society by Dr. J. O. Affleck entitled "Nature's Object-Lessons in Disease," and dealing chiefly with the importance

of careful observation for purposes of diagnosis, and the other by Dr. J. W. Ballantyne, delivered before the Edinburgh Obstetrical Society and devoted to an account of those Fellows who have died in the past year. Dr. David W. Finlay writes on alcohol in relation to medicine and adopts a moderate position, admitting the value of the drug as a remedy in some cases, especially those of acute febrile disease, but holding that there is still too great a tendency to prescribe it as a routine measure. Dr. A. Dingwall Fordyce continues his studies of the digestion and feeding of infants, and Mr. J. S. Fraser contributes notes on submucous resection of the nasal septum. Dr. Francis D. Boyd narrates some favourable experiences with the ophthalmic reaction of Calmette (tuberculin) as a diagnostic test.

*The Journal of Physiology.* Edited by J. N. LANGLEY, Sc.D., F.R.S. Vol. XXXVI., Nos. 2 and 3. Nov. 29th, 1907. London: F. Clay. Price 8s.—The contents of these numbers are: 1. The Conditions of Maintenance of Maximal Tissue Respiration in Artificial Perfusion Experiments, by H. M. Vernon, Physiological Laboratory, Oxford. This is a continuation of previous researches. 2. On the Relation between the Physical, Chemical, and Electrical Properties of the Nerves, Part. I., by N. H. Alcock, M.D.Dub., physiological laboratory of the University of London, and J. Roche Lynch, physiological laboratory, St. Mary's Hospital. This is an attempt, from the study of the physical and chemical constitution, to find some explanation of the electrical phenomena of the nerves. They show that the average percentage of water in the medullated nerves of cats is 67·3, of dogs 69·7, of goats 75·4, and of horses 69·3. It differs in different animals of the same species and in different nerves of the same animal. 3. Genesis of the Alternating Pulse, by Dr. L. J. J. Muskens. 4. The Excitable Substances of Amphibian Muscle, by Keith Lucas, Trinity College, Cambridge. 5. On the Supposed Occurrence of Uroleucic Acid in the Urine in some cases of Alkaptonuria, by Archibald E. Garrod and W. H. Hurtley, Chemical-Pathological Laboratory, St. Bartholomew's Hospital. 6. A Method of Quantitative Estimation of Cystin in Urine, by J. F. Gaskell, Chemical-Pathological Laboratory, St. Bartholomew's Hospital. 7. On Glycogen Formation by Yeast, by F. W. Pavy, F.R.S., and H. W. Bywaters, Ph.D., F.I.C. 8. Separation of Proteins, Part II.: Deutero-Albumose, by H. C. Haslam, Pathological Laboratory, Cambridge. 9. On an Apparent Muscular Inhibition produced by Excitation of the Ninth Spinal Nerve of the Frog, with a Note on the Wedensky Inhibition, by V. J. Woolley, Physiological Laboratory, Cambridge. Mr. Woolley finds the eighth spinal nerve as effective in producing inhibition on stimulation as the ninth. 10. Strychnine and Reflex Inhibition of Skeletal Muscle, by C. S. Sherrington, Physiological Laboratory, University of Liverpool. The reflex innervation of antagonistic skeletal muscles suffers under strychnine a change which Dr. Sherrington briefly describes as a replacement of reflex inhibition by reflex excitation. The Proceedings of the Physiological Society for Oct. 19th are also given.

*The Quarterly Journal of Microscopical Science.* Edited by Sir E. RAY LANKESTER, K.C.B., F.R.S., with the coöperation of ADAM SEDGWICK, M.A., F.R.S., SYDNEY J. HICKSON, M.A., F.R.S., and E. A. MINCHIN, M.A. With lithographic plates and text figures. New Series, No. 204. Vol. LI., Part 4. November, 1907. London: J. and A. Churchill. Price 10s. net.—The contents of this part are: 1. The Development of the Head Muscles in Gallus Domesticus and the Morphology of the Head Muscles in Sauropsida, by F. H. Edgeworth, M.B. Cantab., D.Sc. Lond., professor of medicine, University College, Bristol, with 39 figures. A full description of the cranial muscles is given with the names applied to them by Bradley, Fürbringer, Gadow, Hoffman, Kingsley, Osawa, Parker, and Versluys. 2. The Development of Ophiothrix Fragilis, by E. W. MacBride, F.R.S., professor of zoology in McGill University, Montreal, with six plates and four figures. The development of both normal and abnormal forms is satisfactorily given. 3. On the Segmentation of the Head of Diplopoda, by Margaret Robinson, University College, London. The author adduces evidence showing that the diplopod head can now be shown to consist of six segments—namely, a segment which together with the acron of Heymons forms the procephalic lobes; the antennary segment; the trito-cerebral segment, representing the second antennary segment of crustacea and trito-cerebral rudiments in Hexapoda and Chilopoda; mandibular; first maxillary (rudimentary); and second maxillary segment, the appendages of which are fused to form the gnathochilarium. 4. The Fixation of the Cypris Larva of Sacculina Carcini (Thompson) upon its Host Carcinus Mœnas, by Geoffrey Smith, M.A., New College, Oxford. This is an interesting essay giving an account of the nauplius stage and of the process by which the kentrogon larva is formed, which is a little oblong sac encased in chitin attached to the hair of the crab by means of the antennula of the cypris. 5. Physiological Degeneration in Opalina, by C. Clifford Dobell, B.A., of Trinity College, Cambridge. The opalina is one of the ciliated protozoa found in the intestine of the frog and toad. It undergoes encystment contemporaneously with the period of sexual activity of its host, and it is with the degenerative changes which then occur that the paper deals. The opalina divides irregularly into fragments containing several nuclei the fragments lose their cilia; and form eosinophile globules of high refractive power. The chromatin increases and forms a layer. Then division of the nucleus and often also of the cytoplasm occurs. Finally, a number of atrichous forms are produced. 6. Some Facts in the later Development of the Frog (Rana Temporaria)—Part I., the Segments of the Occipital Region of the Skull, by Agnes I. M. Elliot, B.Sc., Associate of Newnham College, Cambridge, with two plates.

*St. George's Hospital Gazette.*—The solid medical matter provided in the issue of Nov. 28th consists in a paper read before the hospital Hunterian Society by Dr. Ll. Powell entitled "Comfort in Anæsthetics." It contains much sound advice likely to be useful to the beginner in anæsthetics and to conduce not only to the comfort of the patient but also to that of the administrator. The author appears to prefer nitrous oxide gas and ether for routine work if there is no contra-indication, and has little that is good to say of the use of ether alone by the open method as practised in America.

*Guy's Hospital Gazette.*—The presidential address delivered before the Nottingham Medico-Chirurgical Society by Dr. Lewis W. Marshall and entitled "Children's Work in Medicine"—work done not by but on children—is published in the issue of this magazine of Nov. 30th. Dr. Marshall regrets the small amount of attention paid to the study of children at the medical schools and emphasises the value of this training for future practice. He notes the mistake of beginning the intellectual education of a child before the age of seven and also the importance of maintaining good bodily nutrition and establishing sound habits as preventives of such troubles as stammering, enuresis, and so forth. Finally, he lays stress upon the serious nature of rickets as a cause of infantile mortality and deprecates the tendency to make light of this ailment. Dr. Douglas Bryan contributes a paper on Hypnotism and Treatment by Suggestion.

*St. Mary's Hospital Gazette.*—In the November number is published a paper by Mr. H. E. Corbin on Difficulties in the Diagnosis of Fevers. Of the reality of such difficulties there can be no doubt but unfortunately written rules are seldom of much assistance in overcoming them. The paper, however, contains much useful information. Among the editorial notes are some rather unkind quotations from examination papers written by nurses.

# THE LANCET.

*LONDON: SATURDAY, DECEMBER 21, 1907.*


## A Sanitary Bulletin.

WE have received from Chicago an extremely interesting document which is entitled a "Bulletin" from the Health Department of that city and is published weekly by the School of Sanitary Instruction in Madison-street. It is described as being intended to afford instruction in sanitary matters, chiefly to the laity, and to help the medical profession by "popular education in non-technical phrase." The number before us, bearing date of Nov. 23rd, 1907, consists of six octavo pages printed in double columns and containing a brief account of the state of health of the city for the week just past, followed by an outline of the duties discharged by the sanitary authorities during its course. These duties comprised the supervision and isolation of infectious diseases, bacterial and other examinations in the laboratories, milk inspection, ice inspection, food inspection, and ambulance work, and the summary of them is followed by a notification that the bulletin is now being placed in the hands of every physician, clergyman, school principal, and newspaper publisher in the city, besides being sent to all health officers of surrounding towns and to such laymen and organisations as may be interested in, or of service to, the work of safeguarding the public health. The department, we are told, has long recognised in the daily press a potent auxiliary in the development of sanitary science, and observing with regret that the absence of the sensational and the spectacular in the work limits the space accorded to it in the columns of newspapers, has determined to meet the difficulties so arising by a largely increased circulation of the bulletin. The story of the week's procedure, simple enough in itself, is told in the simplest and plainest language, without the introduction of a single word of unintelligible technicality from the beginning to the end of the narrative, and the record is throughout as practical as it is simple. We read, for example, that "meat inspectors reported 36 markets and groceries in bad sanitary condition. These were given 15 days' notice to make the necessary changes. 67 places previously found in bad sanitary condition were re-inspected. It was found that 60 had complied with the department's instructions, and suit was entered against the seven who had not complied." A similar record appears against milk dealers and ice dealers, and 88,547 pounds of foodstuffs were condemned and destroyed during the week. The month of November, up to the date of the publication, had been exceptionally healthy and readers are told that the mild weather, by enabling people to be more out of doors than is usual at this season, had been largely contributory to the result. This leads to the reflection that "if people would live more in the open air and less in overheated and ill-ventilated quarters pneumonia would be much less prevalent than it is during the fall and winter months." Moreover, the attention of the department has been directed to the ventilation of street cars and the Sanitary Commissioner has decided to recommend to the traction companies that an open trailer should be attached to each train for the accommodation of people who recognise that danger lurks in the air of closed unventilated cars and who realise the healthful effects of the open air.

It would, we think, be difficult to exaggerate the possible good effects of a publication of this nature, concise in form, simple in character, trifling in bulk, transparently clear in diction, and frequent in recurrence. We have in this country many excellent publications on sanitary subjects but they are addressed rather to experts than to the public and they have to contend against many defects of form as well as of substance. Nothing could be more admirable, in their way, than the annual reports of the medical officer to the County of London but each report is a bulky folio containing so large an amount of material that much of it can only be expressed in tabular form, and hence tends to repel, rather than to attract, a large number of those who might study it with advantage. The reports frequently issued by the Local Government Board, and containing the results of the investigations made by medical inspectors, are usually in the highest degree instructive but they fail to reach the public directly, and the daily and weekly press seldom bestow upon them the notice which they deserve. A similar remark applies also to the annual reports of county medical officers of health. All these documents, moreover, lack the force which the Chicago bulletin must derive from the *sæpe cadendo*, from the weekly "pegging away," if we may use the phrase of one of the greatest of Americans, by which the facts which they reiterate cannot fail in time to be driven home even to a comparatively unintelligent community and by which the daily work of the sanitary authorities is described while it is still fresh, while it is grappling with evils which are in actual existence in the next street and which threaten the health or safety of those who read while the paper is yet in their hands. The story of a present danger to health, and of what is now being done to obviate it, must always, as human nature is constituted, appeal far more strongly to the mind than the story of a similar danger which existed two years ago and against which the energies of health officers were then more or less successfully directed. The attitude of the British paterfamilias towards dangerous nuisances is frequently much like that of the Russian peasant who said that heaven was very high and the CZAR a long way off, and who therefore failed to realise the mere possibility of any mitigation of the evils of his lot. No medical man doubts that the disease-rate of the country might be reduced at least one-half by proper sanitary administration, or that the cost of such reduction would be recouped by the consequent pecuniary saving. The chief, if not the sole, impediment is the apathy which proceeds from ignorance.

The population of Chicago now numbers more than 2,000,000 and the sanitary organisation necessary for the maintenance of the high existing standard of health there must be very much larger than that of any extra-metropolitan

community in the United Kingdom. The difference, however, is only one of magnitude, not of kind, and that which is done in Chicago has also to be done, although on a smaller scale, in every great provincial city in this country. Many of these cities greatly pride themselves on the steady pursuit of an enlightened policy in all public affairs, and it is not too much to hope that some of them, under the guidance of their medical officers of health, may be induced to follow the example of Chicago and to sanction the issue by those officers of weekly reports of an analogous kind, showing week by week the action which has been taken and the results which have been obtained, as well as the dangers actually present and then requiring to be guarded against. In the bulletin under consideration we read that the November infantile mortality of Chicago, reduced to an annual rate, has been less than 93 per 1000, against 114 in November, 1906, and that the total annual death-rate has been 13·24. In the week under consideration 81 deaths were due to pneumonia, against 90 in the corresponding week of last year, 57 to consumption, 51 to heart disease, 48 to Bright's disease, and 26 to cancer; while the mortality from typhoid fever, scarlet fever, and diphtheria was so small as to be insignificant, except in so far as the cases might represent centres of possible infection on a larger scale. On the whole the record, whether of action or of results, is one of which the authorities of so populous a community may be justly proud. Among other noteworthy matters it is observed that "immunisation of those exposed to diphtheria has been practised to a considerable extent by the inspectors, and is believed to have aided in reducing the number of new cases," and that the number of examinations of school pupils by the school medical inspectors during the week amounted to 26,252, with the result that 455 children were excluded from school on account of infectious diseases. It is believed that by this procedure epidemics both of diphtheria and of scarlet fever have been prevented and that through the vigilance now exercised very few instances of contagious disease among children are, or can be, concealed. The bulletin declares, in typical American phraseology, "that we uncover about all cases which are not promptly reported." We trust that before long we may see English communities offering to Chicago the flattering homage of imitation.

## The Training and Supply of Midwives.

THE work of the Association for Promoting the Training and Supply of Midwives has been brought recently to the attention of our readers. We have just published several interesting articles and letters whose bearing on the training and supply of midwives is obvious, while the association held a meeting on Thursday, Dec. 5th, which was widely reported and which was also made the subject of a leading article in the *Times*. With regard to this article the executive committee of the association has written to controvert the statement made by the *Times* of Dec. 7th that the meeting convened by that association will hardly satisfy either its promoters or the general public who had looked for information which was not forthcoming. The committee denies that there has been any failure on its part to state definitely the means by which it is proposed to deal with the present urgent need of the widespread training and supply of midwives. It contends, on the contrary, that in the four years during which its association has existed it has done a great deal. It has trained and supplied midwives for several county nursing associations, it has coöperated with the London County Council in its lectures to midwives, it has midwives of its training at work in many districts, and lately it has circulated to all local authorities a pamphlet containing a large amount of important statistical information bearing on this question. Further, it is because it now feels that it has acquired enough experience and accumulated enough information to utilise to the utmost any sums with which it may be intrusted that it is emboldened to come before the public with an urgent appeal to carry out the work which without liberal support is absolutely impossible.

The committee considers that the elaboration of a comprehensive scheme for the whole country must be a matter for time and the most careful thought and deliberate action, and to this it is giving its most earnest consideration. This is a view that we must all endorse. The suggestion that some such scheme as that on which the Queen's Jubilee nurses are supported and supplied would seem to be the ideal plan, but this scheme was only rendered possible by the generous action of the late Queen VICTORIA who presented the gift of £50,000 from the women of England to be used for this purpose. The committee now appeals for funds to place the nursing of the poor in childbirth on the same footing as their nursing in ordinary sickness, and it is prepared to train and to distribute, and possibly in some instances to support, as many midwives as the funds intrusted to it will provide for. It calculates that £25 will train a midwife, £50 will train and endow a midwife for a year, and each £500 invested will train and permanently endow a midwife. Possibly some such scheme as that adumbrated by the committee will prove a solution of the difficulty concerning the supply of midwives, which is already becoming a most serious one, but we agree with the *Times* that the association is more likely to obtain a response from the charitable public if it will bring forward a definite and well-thought-out scheme so that the subscribers may form some idea as to how their money is to be expended and what the result is likely to be. No scheme will prove successful unless it is worked in collaboration with the various local authorities so that the midwife may be supervised properly and work in harmony not only with the local authority but also with the local practitioners, and it is of the utmost importance that local interest should be excited and that the inhabitants of the different localities to be provided with midwives should feel that they must play their part if necessary in helping them to make a living. The goodwill and coöperation of the neighbouring practitioners will be an important factor in insuring the smooth working of any such scheme and in further insuring that the midwife shall make a living wage at any rate in those districts where it is possible for her to do so.

We must confess that we were disappointed at the failure of most of the more important speakers at the meeting on Dec. 5th to place before their audience any information as to what exactly was intended to be done,

and we must repeat that if the association wishes to obtain a really adequate response to its appeal it should lose no time in acquainting the public with exact details of what is really required, what it hopes to do, and how the various difficulties are to be met adequately. It is quite certain that the arrival of the year 1910 will find the supply of properly trained midwives far from sufficient and perhaps it might have been better to have allowed a longer interval of time to elapse before giving effect to the clause of the Midwives Act which renders it a legal offence for any woman other than a qualified midwife to attend another in childbirth for pecuniary gain.

## Garbage at Popular Prices.

THE danger to which the poorer classes of the community are exposed owing to the reckless greed of those who supply them with food, and who trade upon the popular and reasonable desire to obtain cheap "delicacies," has been illustrated over and over again in our columns. Three cases occurring in the police courts within a few days of one another only serve to accentuate the point, but they are worth a little detailed consideration because of the importance of the whole matter from a public health point of view. Bread in the shape of confectionery, or pastry requiring eggs for its manufacture or for glazing it, and "chocolate creams" may be regarded as luxuries, and much potted meat and sausage meat form appetising rather than economical articles of diet and so fall in the same category. The first case to which we refer dealt with potted meat or sausages. The "delicacy" was only in embryo. A policeman stopped a procession of three worn-out horses near the docks, one of them being practically unable to walk and the others doing so with difficulty. The legs of one were described as much swollen and discharging from many wounds, and a summons was issued for cruelty against the responsible person with the result that he was fined £5 with £2 11*s.* costs, a fine of £1 being inflicted on the man under whose charge the poor brutes were when first seen by the policeman. As to their destination there was no secret; they were being shipped to the continent to be slaughtered, and, it was stated, were intended for consumption in the form of potted meat or sausages. In the second case the defendant was charged with having on his premises 25 casks, besides other vessels, containing eggs without their shells, intended for human food, but unsound and unfit so to be used. There was evidence that these "liquid eggs" were sold to bakers and confectioners and that a large trade was done in them. The defendant told a story akin to those narrated by defendants in similar cases, who account for the presence on their premises of putrid preserved milk by saying that it is kept to sell for fattening pigs or to be used for manure. The story went that these "liquid eggs" were intended to be treated with boric acid and boiled, when they would serve as food for poultry and not for human beings. The magistrate, however, after hesitating whether to send the defendant to prison or not, fined him £100 and ordered him to pay 10 guineas costs.

Thirdly, we come to the chocolate creams, the sale of which was conducted with considerable misplaced ingenuity. These dainties were sold upon barrows in the streets to children labelled as "Gailer's" chocolate, in packets which imitated those of a well-known firm of manufacturers, and the company obtained a conviction of the offender for using a false trade description. The legal offence and the manner of its proof are public concern, but to medical men who may be called upon to trace the causes of illness among poor children likely to consume such delicacies, the evidence as to the composition of that which was sold under the name of chocolate will be of deeper interest. The manager of the prosecuting company said that the lowest grade of sugar had been used covered with a substance which might have been produced from the refuse of cocoa beans incorporated by means of some fatty material, probably paraffin wax. The spurious packets were further shown to have been obtained at 7*s.* 6*d.* per gross, so that they were retailed for 1*d.* each at a profit of about three-eighths of a penny. The retail price of the corresponding packets of the genuine chocolate would have been from 3*d.* to 6*d.* In this case a fine of £20 with £10 10*s.* costs was imposed, and three gross of the packets found on the defendants' premises were ordered to be destroyed. It was elicited that they had been purchased from a man who was convicted of a similar offence in 1896 and who, it is to be hoped, will be prevented from carrying on his dishonest trade in future. Possibly when the Merchandise Marks Act does not apply the Sale of Food and Drugs Act might be found strong enough to prevent the sale to children of "chocolate" which, to quote the words of the prosecuting counsel in this case, "has only a nodding acquaintance" with that article of diet. It is difficult, however, in the absence of definite standards, to prove precisely what sweetmeats sold in the streets to children should be; and with regard to the ingredients of prepared articles of diet, such as sausages and "potted" meat, or pastry, or chocolates, it is only by detecting them before they have been fully disguised by manufacture that satisfactory proof of their unfitness can be obtained.

# Annotations.

"Ne quid nimis."

## CHRISTMAS DIETETICS.

IT cannot be denied that one of the joys of the human race is the partaking of good, palatable food, and many an occasion would be exceedingly dull and uninteresting if part at any rate of the proceedings did not include the attractions of the table. We speak of festive occasions, meaning literally that food is an item, if not the principal item, of the entertainment. Christmas is such an occasion and is so far connected with a special devotion to dietetics that some foods are directly associated with its name. We have, for example, the Christmas pudding, an embodiment of good things; Christmas beef, a satisfying, invigorating food; Christmas turkey, an equally good food but prized particularly by those to whom it is an occasional luxury; and so on. Food undoubtedly contributes in a large measure to what is called Christmas cheer, and there is no reason, moral or even physiological, why it should not do so. This fact, however, affords a theme upon which it is easy enough to moralise, as obviously the danger of all festivity is excess. People do not apprehend so easily the pains and penalties which come in the train

of excessive eating as they do the evils which follow excessive drinking. And yet, as medical men well know, a bout of gluttony carried, as it often is, to a swinish extent may do the complex human machine a serious injury and may serve to lay the foundations of chronic disease. Excessive indulgence of alcoholic drinks may lead on more insidiously to disease than over-indulgence in foods may seem to do; but out of an excessive dietary poisons are easily elaborated within the human body, the functions of the digestive organs are overtaxed, food escapes digestion, and it is undigested residues which frequently set up toxic symptoms. All this may be a stale doctrine, but the consistent preaching of such truths for a good many years by the medical profession has borne fruit and has convinced a large section of the public of the value of adopting a steady, sober standard in matters pertaining to food as well as to drink. To the careful inculcation of the first principles of hygiene we attribute the present steady, sober habits of the nation as compared with the greed and gluttony which were rife a century ago and Christmas cheer is none the less cheerful now than it was then, nor need it be.

## KING EDWARD'S HOSPITAL FUND FOR LONDON.

ON Dec. 16th His Royal Highness the Prince of Wales presided at a meeting of King Edward's Hospital Fund for London at Marlborough House, when it was announced that the receipts of the Fund up to Dec. 12th, after payment of expenses, amounted to £147,236. The report of the executive committee recommended the distribution of £121,000 among London hospitals. This sum includes the £1000 which the London Parochial Charities give annually. The number of hospitals applying for grants was 99, as against 105 last year. In moving the adoption of the report, which was carried unanimously, the Prince of Wales said that the receipts for 1907 included several large sums, such as the gift of £100,000 from Mr. Carnegie. This would probably be placed to capital. In the course of the proceedings Mr. John Burns, President of the Local Government Board, referred to the question of the relationship of general hospitals and Poor-law infirmaries and outdoor relief generally. As considerable overlapping existed he suggested that a committee of the Fund should be appointed to investigate the matter. In regard to consumption there was a demand for compulsory notification. If this demand were hurriedly complied with there would be an enormous, almost an overwhelming, claim made for new sanatoriums. As a result of the laborious industry of Dr. H. Timbrell Bulstrode he had obtained valuable information on this very important question and he (Mr. Burns) proposed early next month to circulate that information at home and abroad. It should be mentioned that the League of Mercy will probably contribute £18,000 to the Fund.

## THE MEDICAL INSURANCE COMMITTEE.

THE attention of medical men who may have occasion at this time of the year to take out or to renew policies of insurance may be drawn to the facilities which the Medical Insurance Committee offers. The Committee was formed early this year in view of the new liabilities created by the Workmen's Compensation Act which came into force on July 1st last, liabilities which are specially serious in the case of medical men employing assistants, locum-tenents, or dispensers. Any profit which the agency conducted under the direction of the Medical Insurance Committee may make will be devoted to benevolent purposes, and full particulars can be obtained on application to the Secretary, Medical Insurance Committee, at the offices of the British Medical Association, 6, Catherine-street, Strand, London, W.C. We take the opportunity to urge on the serious consideration of our readers the liability with regard to locum-tenents which may arise under the recent Act. It is true that a person whose annual remuneration exceeds £250 a year is not included in the scope of the Act, but as the rate is stated by the year it is probable that the courts would hold that a locum-tenent whose total remuneration had not amounted to £250 in a year would be entitled to benefit under the Act even though the weekly rate paid for the particular engagement was as much as, say, five guineas a week. The Medical Insurance Committee has arranged with the Guardian Assurance Company to cover the risk for a minimum payment of 5*s*., provided that the period during which the locum-tenent is employed does not exceed a period of, say, ten weeks. The rate is governed by the general principle that the premium for covering the risk with regard to medical assistance of all sorts which the principal may employ shall be at the rate of 10*s*. per cent. on the total sum expended in this way. The premium for a collector employed to collect accounts would be at the same rate, but for a bookkeeper the premium would be 3*s*. per cent., the rate charged for a clerk in an office.

## THE GOVERNOR OF BOMBAY AND PLAGUE.

EVER since his arrival at Bombay the new Governor of that Presidency, Sir George Clarke, has devoted a considerable portion of his time to a thorough examination of the great plague question which he justly regards as one of the most important questions with which he has to deal. He has inspected the worst plague haunts in the city of Bombay and has also investigated the whole process of manufacturing the prophylactic against the disease. In a circular letter which he has addressed to the editors of all the vernacular journals published in the Presidency he declares his belief that inoculation "has already saved thousands of lives. I have seen," he adds, the manufacture of the fluid, which is now so carefully conducted that contamination seems impossible. If applied before the individual becomes infected it is the greatest safeguard known to science and the protection lasts through the plague season. ..... If all the people in infected areas would be inoculated the plague would quickly disappear throughout the Presidency." It is perfectly true that inoculation as a preventive of plague has now been tested in every conceivable way and found to be absolutely innocuous. If the people of India could only be induced to adopt inoculation the plague could be kept within bounds as easily and as effectively as small-pox is in Europe. Most unfortunately, however, the antidote is almost universally looked upon with suspicion by the native inhabitants of all castes and creeds. The teaching of the last 11 years has failed to sink into their minds. No doubt perfect sanitation would annihilate all pestilence: it would put an end to all infectious maladies; but before perfect sanitation, or anything approaching it, could be hoped for, even in England, many disease-laden years would have to pass. In India especially it is vain to hope for an immediate result from sanitary measures but, of course, that is no excuse for ceasing to labour for the benefit of future generations. Evacuation has shown itself an efficient safeguard against plague but it is exceedingly costly, infinitely so in comparison with inoculation, and it cannot be thoroughly carried out in large towns. The chief objection to evacuation lies, however, in its transitory nature. When the people who have been evacuated return to their homes their sanitary state is no better than it was when they left. Rat-killing is likewise merely a palliative. So prolific is the rat in India that nothing short of extermination can have a lasting effect, and moreover it is possible, as was recently suggested, that rats and fleas may not be the sole harbourers and transmitters of plague bacilli. It is quite conceivable that human beings may receive the plague infection from other sources. Commenting on Sir

George Clarke's circular the writer of a leading article in the *Times of India* says :—

> The situation is full of gloom. This is only the beginning of the epidemic season, yet the pestilence is carrying off victims at the terrible rate of over seven thousand a week, and, unless the epidemic runs an altogether exceptional course, the mortality will be appalling before the hot weather approaches bringing a period of temporary safety. His Excellency's letter places the situation in the clearest relief. This fearful loss of life which has gone on for eleven years, and which without a radical change of measures will continue indefinitely, is preventable.

The writer then proceeds to discuss the means whereby the great masses of the people can be induced to have recourse to inoculation. He continues :—

> After all, the preparation of the prophylactic and its action must be esoteric processes to most Indian minds. Many educated Englishmen would be hardly exercised if suddenly called upon to expound the principles of inoculation and to give a lucid account of the methods of manufacture. We would suggest therefore that His Excellency's appeal for coöperation should be supplemented by a systematic endeavour to produce the understanding that is at the root of all good work. Why should not Government invite the editors of the leading vernacular journals to visit the laboratory, to see for themselves the whole elaborate process of manufacture, and to learn the exact means through which the prophylactic gives immunity. ..... We are convinced that there are no directions in which the hospitality of Government and the time of its officers could be more profitably expended. Nor is there any reason why the hospitality of Government should be confined to journalists. Presidents of mofussil municipalities, health officers, influential private practitioners, unofficial chairmen of local boards—all these gentlemen can help in spreading confidence in inoculation and their help will be needed if the campaign is to be successful.

This suggestion of our contemporary appears to be an excellent one. Much of the opposition to inoculation in India is due to ignorance. If the people were satisfied that the prophylactic against plague was as harmless as vaccine the progress of the pestilence would soon be checked. The ravages committed by plague in India are fearful. According to the figures given in the House of Commons by Mr. John Morley on July 9th and published in our issue of July 13th, the number of deaths from plague in India during the last ten years was 4,411,242. During the present year, from January to May, the death-roll has already included 991,003 persons, making a total in ten years and five months of 5,402,245. We are glad to see that, according to extracts from the vernacular papers which are published in the *Times of India* of Nov. 23rd, enlightened native thought is in favour of inoculation.

## HÆMORRHAGES FROM THE MUCOUS MEMBRANES AND INTO THE SKIN IN BRIGHT'S DISEASE.

HÆMORRHAGES in various parts of the body are a well-recognised symptom of Bright's disease. But hæmorrhages of the severity described in the following cases are very rare. In the *American Journal of the Medical Sciences* for November Dr. David Riesman has reported the following case. A Russian sailor, aged 30 years, was admitted into hospital on March 21st, 1904. He had suffered previously from two attacks of nephritis—the first seven years before, characterised by swelling of the feet, and the second two years later, in which the face chiefly was swollen. A third began three weeks before admission with swelling of the face but he was able to work until a few days before admission. He was pale and ill-nourished and complained of headache. The face was swollen, especially around the chin and left eye and in the left malar and temporal regions. The left eye was inflamed and the conjunctiva was chemotic. The heart was enlarged, the apex beat being in the sixth interspace in the nipple line. The first sound was muffled and the second accentuated. The radial and temporal arteries were thickened. Blood examination showed: red corpuscles, 2,350,000; white corpuscles, 15,200; and hæmoglobin, 50 per cent. There was no œdema of the legs. The right pupil was dilated and immoveable; the cornea was insensitive and the anterior chamber was very shallow. The tension was + 2. The fundus gave a dull reflex but no details could be obtained. On the 24th he began to bleed from the mouth. A carious tooth was found which was thought to have caused a wound of the cheek, but though the sharp edge of the tooth was broken off and styptics were applied to the cheek the bleeding continued. For the affection of the eye a leech was applied to the temple. When it dropped off free bleeding from the wound, which required a collodion dressing to check it, occurred. On the 26th the patient had a convulsion and was bled to 15 ounces and given an intravenous saline injection. On the 29th a hæmorrhagic effusion occurred and extended from the right third rib to the costal margin and a few purpuric spots were seen on the right arm. Hiccough began and he gradually passed into a state of stupor. The ecchymosis on the right side increased and the spots on the arm became more numerous. Blood ran from the mouth and the breath was very fœtid. The urine contained 1·5 parts per 1000 of albumin, red corpuscles, and granular and hyaline casts. On the 31st a systolic murmur appeared and was most intense in the third left interspace. Despite active treatment by hot packs and stimulants the pulse gradually grew weaker and death occurred 11 days after admission. In a second case a publican, aged 55 years, was admitted into hospital on Sept. 2nd, 1904. He denied intemperance. Hæmorrhages from the mouth and bowels began. He became stuporous and delirious. The breath had a urinous odour and no urine was said to have been passed for 48 hours. The mucous membranes were pale and the tongue and teeth were covered with recent clots. The heart sounds were clear, the pulse was slow and feeble, and the pupils were widely dilated. Urine, drawn off with the catheter, had a specific gravity of 1010 to 1012 and contained albumin and red and white corpuscles. Blood examination showed red corpuscles 4,440,000, white corpuscles 6680, and hæmoglobin 55 per cent. Death in convulsions occurred on the 10th, the bleeding continuing until the end. The necropsy showed a moderately dilated heart. The kidneys were enlarged and covered with cysts; the capsule stripped with difficulty. The cortex was almost absent and there was marked fibrosis. The gastro-intestinal tract was normal. Dr. Riesman describes these and similar recorded cases, characterised by bleeding into the skin and from the mucous membranes, as "the hæmorrhagic diathesis of nephritic origin." But surely the term hæmorrhagic diathesis has a definite and different significance—an inherited tendency to hæmorrhages of which the cause is unknown. In the report of St. Bartholomew's Hospital for 1880 Dr. Samuel J. Gee has described three cases of purpura in children associated with nephritis. The onset was marked by diarrhœa and melæna. The prognosis of nephritis in which such hæmorrhages occur is bad.

## NON-MEDICAL COMMENTS ON MEDICAL MATTERS.

WE have on previous occasions commented on the ignorance frequently displayed by the non-medical press in dealing with medical matters, but it is usually ignorance which causes to the initiated mirth rather than anger, as witness the rubbish that was written about appendicitis and perityphlitis in certain journals at the time when our King was so happily delivered by surgical skill from the peril which threatened him on the eve of his coronation. With reference to some remarks lately made on the very sad occasion which has brought to a prominent politician the sympathy of the whole nation we can only feel sorry for the prejudice which seems to have inspired them. The writer in question informs his readers, *inter alia*, that the death of a young lady "adds one more to the long list of those who have fallen victims to the operation for appendicitis. ..... No one can fail to be struck with the number of cases in which fatal consequences ensue after the operation has been performed. Vast strides have been made in surgical

science, but certain it is that death under the operating knife is becoming a fact of only too common occurrence." After remarking that few people cannot name some person, possibly very near and dear, who has succumbed to the shock to the system which this operation entails, the article concludes that the sad death on which it is commenting "brings home once more the dangers of this terrible drastic operation." Such remarks afford to our readers an example of the sort of prejudices which their patients are liable to imbibe from the influence of the non-medical press on matters of high technical knowledge such as this about which such glib and sweeping assertions have been made. The heedless comment, moreover, affords by inference a most unjustifiable criticism of the management of the case in question for which there is neither warrant nor excuse.

## THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of the constituents of this Fund was held at the Mansion House on Dec. 17th under the presidency of the Right Hon. Sir John C. Bell, Lord Mayor. On the motion of Archdeacon Sinclair, which was seconded by the Chief Rabbi and supported by the Rev. W. H. Harwood and Mr. A. Pearce Gould, the report for the year 1907 was adopted. Mr. Pearce Gould, in the course of his remarks, pointed out that the hospitals did more than benefit the poor. There was not a man, woman, or child among the whole community who did not benefit in times of sickness by the work done in our large hospitals. Nor was it in times of sickness only that they benefited, for the knowledge gained in hospitals contributed largely to the general health enjoyed by the community. Previously to the adoption of the report the Rev. Lionel S. Lewis moved an amendment, which was lost by a large majority, to the effect that the question of a grant to the Antivivisection Hospital at Battersea should be referred back to the committee of distribution. On the proposition of the Rev. Canon Fleming, seconded by Dr. J. G. Glover, June 21st was fixed for Hospital Sunday, 1908. The council for the year 1907 was re-elected for 1908, with the addition of Canon Curtis, Lord Leith of Fyvie, the Hon. Harry Lawson, Sir James Reid, Sir Thomas Smith, Mr. Douro Hoare, and Mr. Thomas Wakley to fill vacancies. The proceedings were terminated by a vote of thanks to the Lord Mayor.

## A NEW SHRINE OF ASKLEPIOS.

A PAPER of considerable medical as well as archæological interest appears in the current number of the *Journal of Hellenic Studies* (Vol. XXVII., Part 2) by the eminent epigraphist, Canon E. L. Hicks. The medical interest in the article centres in two votive inscriptions to Asklepios found in Mudania in Asia Minor. These present some rather unusual features and prove that Myrlea, the ancient Greek city of Bithynia, which occupied the site of Mudania, possessed an altar or temple to Asklepios and that near or through his sanctuary there flowed a stream of water artificially brought by a conduit (διῶρυξ). There are medicinal springs, as well known to ancients as to moderns, at Brusa, ten miles inland, but from the disposition of the watershed it is improbable that there was any connexion between them and this conduit, which most probably took its water from springs on the closely neighbouring foot-hills. Both inscriptions are upon marble tablets, bear the serpent of Asklepios, and date from the second century A.D., Myrlea, or Apameia as it was renamed, being then a Roman colonia. In one inscription, after invoking good fortune, a Roman, Caius Naevius Justus, makes a free gift to the god of a στοα, or colonnade, and of the site upon which he had built it, in acknowledgment of his deliverance (ὑπέρ σώτηριας) probably from some epidemic. Whether the influence of the god was curative or merely preventive does not appear, but it is interesting to note that he specifies the god as being both of Epidaurus and of Pergamos, and as being ἐπηκόῳ attentive or listening (to prayer), and also describes him as living in the conduit (διώρυγα κατοικοῦντι), a very unusual description of a god. The second inscription is of a similar character, a dedication by one Gracchis (a hitherto unknown proper name), who describes himself as an orphan and particularly specifies his own deliverance. We may therefore assume that he lost one or both his parents in the epidemic from which he was himself saved. He also alludes to the god inhabiting the canal, the dedication being to Ασκληπιῳ Διωρυγείτῃ. The inscriptions, which were found by M. Jean Gaetano of Mudania during building operations, were first copied, appropriately enough, by a medical man, Dr. J. A. Glover, in April, 1907.

## APPETITE.

Dr. J. Strickland Goodall read a paper on the value of appetite in digestion at the Institute of Hygiene on Dec 11th. His lecture contained many suggestive remarks on the appetite, such as the following:—"Hunger originates in the tissues generally and not in the stomach in particular, for hunger may exist after the stomach has been excised and normally in certain animals when their stomachs are full of food. The sensation is simply referred to the stomach as the organ in which appetite is naturally appeased. ..... Appetite may be defined as a desire or inclination for food which in the new-born child, at any rate, is invariably begotten of hunger." It was pointed out that the newly born child has no likes and dislikes about food, for he or she has no accumulated experiences on the matter. The only two complete sensations, Dr. Goodall said, with which we come into the world are "the vague internal sensation, hunger, and the almost equally vague cutaneous sensation, touch." The special senses, he considered, were chiefly of post-natal development—taste, smell, sight, and hearing being only perfected "after some considerable time." As the senses developed the experiences of food were stored up, definite likes and dislikes for its varieties were formed, and the primitive "hunger appetite" became modified by an important psychic factor, visual and olfactory not less than gustatory experience being concerned. In the fully evolved appetite of the adult Dr. Goodall found four factors: (1) the primary purely physiological—hunger; (2) the purely psychological—anticipation (of which Dr. Goodall showed his audience the pictorial testimony of certain artists); (3) "a psycho-physiological factor in which distance receptors, the end organs of sight, smell, and perhaps hearing, are stimulated and incite previously formed likes and dislikes"; and (4) the "physiologico-psychic factor due to the non-distance receptor, the end organs for taste being stimulated by the introduction of food into the mouth." The end of the appetite which has such complex foundations—and we are not sure that Dr. Goodall has not over-elaborated his thesis—is briefly "to initiate and insure a secretion of suitable digestive juices and so secure good digestion." The latter part of the paper was devoted to a summary of the physiology of the secretory processes connected with digestion and the lecturer's conclusion of the whole matter, which was the advantage of appealing to the psycho-physiological factor in appetite in order to secure the greatest nutrient benefits of food. The advantage of preparing food palatably and daintily is recognised by most practitioners and has been frequently insisted on in these columns. We believe it was Professor Huxley who remarked that a piece of dry, hard cheese, though of high nutritive value in the estimation of the physiological chemist, will not satisfy the harder critical analysis of the stomach. Dr. Goodall's lecture suggested that he should rather have written for stomach "the psycho-physiological analysis of the consumer of the cheese." In

the matter of feeding sick persons careful preparation of food is of especial importance and this lecture should serve to impress that fact deeply on those who heard it.

## THE POOLS ON THE PAVEMENT.

IT would be interesting to learn whether any sort of a system is adopted with regard to the laying of paving material, at all events in London. If there is a system at all we must pronounce it to be a complete failure and a menace to the comfort and health of the pedestrian. Our street authorities, at any rate, do not seem to share the same opinion as to the merits of the various kinds of pavement laid down, for even in a few hundred yards will be found several different specimens. But the worst of it is that whatever paving is adopted, with the exception, perhaps, of well and uniformly laid asphalt, there are all along the line numberless irregularities which even in fair weather are trying enough to negotiate but which in wet weather divide the pavement into as many pools of water more or less deep, leaving the pedestrian the difficult task of picking out, so to speak, stepping-stones in order to keep himself dry-shod. This task may be accomplished with limited success in the daytime but it is absolutely impossible at night. The roads "pool" in the same way and the traffic pumps out the dirty water which collects in these pools in spurts and splashes which spread in all directions bespattering the pedestrians with mud from head to foot. On the occasion of the recent heavy fall of rain the pavements and roads in the metropolis were a disgrace to any community. We will concede the difficulty of keeping the surface of the roads labouring under the stress of vehicular traffic level and uniform, but surely something could be done to preserve some sort of regularity in the surface of the pavement. The pavements seldom appear to be constructed with the view of the water falling upon them draining away. On the contrary, there are holes and channels in which the water collects and cannot get away. The unlucky pedestrian finds these out, he cannot avoid them, and no wonder that the best leather in the world in these circumstances is not waterproof. Surely a pavement can be constructed which does not harbour water but which rather provides a rapid means of draining the water away and of leaving the pavement only superficially wet.

## THE STUDY OF BIOLOGY IN PORTUGAL.

THE genial climate of Portugal, its extensive coast line, and the comparative proximity of its colonial possessions in tropical Africa present obvious advantages for the study of zoology and botany in almost all their departments. It was therefore with good reason that during the Fifteenth International Congress of Medicine which was held at Lisbon in 1906 some of the German anatomists and physiologists suggested the establishing of a marine biological station in Portugal. Some progress has now been made in the direction thus indicated, the first step being the formation of the Portuguese Society for the Natural Sciences which has 40 members and which held its inaugural meeting on April 29th, 1907. Since that time Portugal has lost a very accomplished naturalist by the death of Professor Barbosa du Bocage, the restorer of the Zoological Museum of Lisbon. Previously to the year 1808 there was in Lisbon a zoological museum from which a great many objects were removed to France by Professor Geoffroy Saint-Hilaire acting under an order of Napoleon I. By long-continued efforts and with the friendly assistance of many explorers Professor Bocage succeeded in repairing these losses. He wrote more than 200 scientific memoirs, of which the most important are his "Ornithology of Angola" and "Herpetology of Angola and the Congo." He described about 100 new or little known species and varieties of animal forms, including the spongiaire hyalonema luzitanica which has also been studied by Perceval Wright. The Lisbon Society of the Medical Sciences, which is now in its eighty-fifth year, commenced its present session last November.

## PUBLIC VACCINATION IN OLDHAM.

AS will be seen from a letter which appears in another column, the medical profession in Oldham has recently had under consideration the matter of public vaccination. Shortly, the position is that the Oldham guardians, with a generosity which does them credit considering the views which are held by the average guardian as to vaccination, proposed to appoint a public vaccinator who should devote his whole time to the work and who would be given a salary of £500 per annum. Owing to recent legislation, however, this scheme was dropped and the guardians decided that the public vaccinator should be paid in the usual way by fees on the minimum scale—namely, 2*s*. 6*d*. per case, with the addition of £15 per annum for a dressing station and a supply of necessary dressings. Before the recent Act making it legal for an objector to obtain an exemption certificate by making a statutory declaration was passed it was estimated that the public vaccinator would upon the proposed scale make about £200 per annum, but since the passage of the exemption Act it is now estimated that he would earn something under £100 per annum. It was therefore decided that the guardians should be asked to guarantee a sum of at least £350 per annum, which is certainly none too much for a whole-time appointment. As we have said above, the Oldham guardians seem to be generously inclined and we therefore hope that they will agree to the request of the Oldham medical men.

## HÆMORRHAGE FROM THE BOWEL AFTER APPENDICECTOMY.

IN the *Journal of the American Medical Association* of Nov. 30th Dr. J. R. Judd has called attention to a condition of which but few examples have been recorded—hæmorrhage from the bowel after appendicectomy. He reports the following case. A man, aged 33 years, had four attacks of appendicitis in two years. For two months after the last attack there was considerable tenderness in the right iliac fossa. On examination deep pressure showed tenderness over the appendix. The abdomen was opened and the appendix was found free except for slight adhesions around the base. It was 5 inches long and acutely congested. The mesentery was ligatured with catgut, a silk purse-string suture was inserted, and the appendix was amputated. The stump was watched for oozing but none occurred. It was inverted and the purse-string suture was tied. The abdominal wound was closed without drainage. On recovering from the anæsthetic there was slight vomiting but the patient was comfortable until 18 hours after operation, when he complained of severe abdominal pains and passed per rectum about 20 ounces of bright red blood. He was alarmed and became rather pale. The pulse was 110 and small. The following further quantities of blood were passed: 23 hours after operation, 12 ounces; 27 hours after, 10 ounces; 31 hours after, 4 ounces; 72 hours after, 7 ounces; 96 hours after, 6 ounces; 120 hours after, 6 ounces; and 144 hours after, 2 ounces. The last four discharges of blood were black, of tarry consistence and foul odour. The pulse continued at from 100 to 110 for three days and gradually fell until it became normal on the fifth day. There was considerable discomfort from meteorism but nothing was done to evacuate the bowels. On the sixth day there was a small motion. The patient was allowed up on the sixth day and left the hospital on the eighth.

The treatment consisted of starvation for 48 hours and the administration of one-sixth of a grain of morphine every three hours for four doses and of bismuth subnitrate 50 grains and bismuth subgallate 20 grains every three hours for seven doses. It has always been Dr. Judd's practice to clamp and to tie with fine catgut any bleeding points before inversion of the stump. In this case it seemed incredible that so much hæmorrhage should follow an operation in which the field was so dry. Some other explanation than hæmorrhage from the stump seemed necessary. A considerable number of cases of hæmorrhage from the stomach following operations on the abdomen and a few cases of such hæmorrhage after operations on the head, urethra, and extremities have been recorded. To explain these hæmorrhages various causes, such as the anæsthetic, traumatism, injury to the omentum resulting in embolism of the stomach, sepsis, and reflex nervous influence, have been invoked. Dr. Judd therefore asks, Why may not these causes also be invoked to explain some of the cases of hæmorrhage from the bowel following appendicectomy? He considers that the following case quoted in Kelly's book, "The Vermiform Appendix and its Diseases," supports his view. A man, aged 40 years, underwent operation three months after an attack of appendicitis. An operation was performed and a ligature was placed around the base of the appendix. Six days later there was tenesmus followed by the sudden discharge of an enormous quantity of blood from the rectum. Also from 300 to 400 cubic centimetres of blood mixed with the contents of the stomach were vomited. The operator thought that the hæmorrhage arose from slipping of the ligature. But the slipping of a ligature around the appendix as late as the sixth day could hardly cause such hæmorrhage and, moreover, does not explain the hæmatemesis. Hæmorrhage after appendicectomy appears to have been first recorded by Dr. M. G. Seelig who described three cases of severe hæmorrhage from the rectum.[1] At the Chicago Medical Society Dr. W. Hessert in 1903 reported three cases of hæmorrhage from the stump of which one was fatal. In the discussion which followed four cases were reported with one fatality. In a paper read at the last meeting of the American Medical Association by Dr. John A. Wyeth several cases were reported and the purse-string suture was condemned as unsafe and ligature and cauterisation were recommended. But hæmorrhage has been observed not only after the use of the purse-string suture and inversion but also after crushing the stump with an enterotribe (C. H. Mayo); after crushing, ligature of crushed segment, inversion, and purse-string suture (A. E. Halstead); and after inversion with two rows of superficial sutures passed through the cæcum around the inverted stump (La Place). More cases have been recorded after the use of the purse-string suture than after other methods. In some of the cases the occurrence of hæmorrhage from the stump has been proved as the abdomen was re-opened.

[1] Annals of Surgery, November, 1904.

## LONDON'S MILK-SUPPLY.

IN view of the powers which are to be sought by the London County Council in the next session of Parliament with the object of being able to exclude milk which may be found to be dirty or impure it is interesting to note that in one of the districts at least, from whence a considerable quantity of milk finds its way to the metropolis, the rural council has just adopted the Dairies, Cowsheds, and Milkshops Order, 1885, and these regulations will come into force with the new year. The district in question is Hailsham in East Sussex. Some of the cowkeepers are not inclined to be at all friendly to the new regulations but their remedy is a very simple one. They have only to take care that the premises comply with the Order and that their business is carried on under conditions of cleanliness. They must realise that in the production of milk there is something beyond the £ *s. d.* side of the question—there is the growth of the nation practically in their hands. Care must be taken that cows are free from tuberculosis, that contamination may not be caused by germs from the milkers' hands or clothes, or drifting about the cowsheds, that the vessels for storing the milk are kept clean, and that the drainage and water-supply are satisfactory. Surely these are easy matters to cowkeepers who have any interest in their business. The sanitary authority will not be found to be unduly severe in its demands; it is not at all likely that the very letter of the regulations will be enforced at once. The adoption of this Order should be of great assistance to the metropolitan sanitary authorities and the Hailsham council's action seems to suggest that, as the Order is over 20 years old and has only just been acted upon, there may be many other rural bodies which ought to fall in line. Far from looking upon the Order as a hindrance to them in their business, cowkeepers should regard it as something in the near future which will help them, if only to secure a higher price for good clean milk. London purveyors have recently had an object-lesson in the risk which they run in retailing dirty and impure milk and as public attention is drawn to the importance of a pure supply it will not be surprising to hear that the middlemen at the great London railway termini find that their customers demand milk from an area governed by the Order. Medical officers in the pasturage districts would be doing a public service in urging on their authorities the importance of the Dairies, Cowsheds, and Milkshops Order, 1885.

## THE EMPLOYMENT OF BARMAIDS.

A MEMORIAL has been presented to the Chancellor of the Exchequer asking him to include in his new licensing legislation to be laid before Parliament proposals for the gradual elimination of the employment of barmaids for the sale of intoxicating liquors. The memorial is signed by a widely representative body, including Sir Thomas Barlow, Mr. A. Pearce Gould, Sir Victor A. H. Horsley, Dr. Mary Scharlieb, and Professor G. Sims Woodhead amongst the medical profession. It will be remembered that political exigencies caused the abandonment of a Bill to this effect in the Parliamentary Sessions of 1906 and we commented upon the matter in a leading article in our issue of Jan. 19th of the present year (p. 177). We are quite in accordance with the memorialists who state:—

> At the 1901 census 27,707 barmaids were returned for England and Wales, and of these 6225 were under the age of 20, and 12,023 were between the ages of 20 and 25 years. Whilst wishing to guard ourselves against casting imputations upon individual barmaids, we believe that their surroundings carry with them special dangers and temptations to which barmen are not subject. From the advertisements in trade papers it is evident that the great majority of barmaids are engaged on account of their attractiveness to men customers.

The expression of these views makes the words that follow all the more surprising; they are:—

> We do not propose that Parliament should interfere with any women now employed as barmaids, except indirectly by cutting off competition and thus enabling them to secure better conditions of work for themselves, but we do ask you to protect the young girls of the nation by prohibiting the employment of new barmaids, unless wives and daughters of publicans, after a given date; those in the trade before that date being supplied with a certificate which will allow them to serve in any public-house without limit of time.

After having stated so clearly the grave perils to which barmaids as a class are liable we cannot understand the explicit desire of the memorialists to exclude the wives and daughters of publicans from the protection of the proposed law. The 1906 Bill contained a similar clause and it is again asked that, as in that Bill, provision shall be made for licensing justices to decide whether publicans' daughters shall be allowed to serve in their fathers' bars, decisions which might well be governed by

irrelevant motives. If there is to be legislation, as we hope there will be, let it abolish the trade of barmaid in its entirety and not condemn the good-looking daughters of publicans to be used as a bait in their fathers' bars—a bait all the more attractive in that they will be often unopposed. We attribute no especial immoral proclivities to girls of this class but we hold that the conversational atmosphere that at times pervades ordinary bar-rooms must at least coarsen the nature of many of the young women who serve their customers. If we see a short and direct Bill introduced into Parliament with no such qualifying clauses we shall not regret the dereliction of last year's measure.

## NOTIFICATION OF INFECTIOUS DISEASE BY TELEPHONE.

Mr. S. A. Mugford, a medical man practising at Balham Hill, was summoned recently at the South-Western police-court for failing to notify a case of scarlet fever to the medical officer of health to the Wandsworth borough council. The facts were unusual in that the defendant, on finding what his patient was suffering from, had attempted to communicate with the medical officer of health on the telephone at a time when there was no one in attendance at the town-hall who could deal with the message and had then informed the Metropolitan Asylums Board, so that the patient was forthwith removed to an isolation hospital. Having done this he appears to have thought that no more was required of him and he had sent no certificate to the medical officer of health. In the circumstances the magistrate treated the case, no doubt rightly, as one of a mistake made through ignorance of the necessity for more formal notification, and took into consideration that so far as the care of the patient was concerned the defendant had acted with promptitude. He also expressed surprise that the message sent by telephone could not be received by someone responsible at the time when it was transmitted and inflicted no further punishment on the defendant than a fine of 1*s.* without making any order as to costs. It is to be observed that the defendant in explanation of his belief that the telephone message would be enough made a statement to the effect that he thought someone would be in the office in the absence of the medical officer of health who would accept notification in his absence, as was done in the case of another borough council with which he was acquainted. This was probably a mistake on his part, as however convenient the use of the telephone may be in order to give prompt information, the law requires that a certificate shall be given in a prescribed form by every medical practitioner on his becoming aware that his patient is suffering from a notifiable disease and provides a penalty for the omission to give it. This is not unreasonable considering the insecurity which must attend the delivery of verbal messages.

SCIENCE and the whole world will mourn the death of Lord Kelvin who was the most distinguished representative of physical and mathematical science since the days of Newton. With all his great wealth of mental power and of knowledge Lord Kelvin, on the occasion of the celebration of his jubilee, admitted, much as his illustrious predecessor in the closing hours of his life had done before him, that he knew no more than he knew and tried to teach 50 years ago.

HIS Majesty the King of Spain, before leaving Kensington Palace, recently conferred upon Mr. Alfred James Rice Oxley, M.D. Dub., Physician-in-Ordinary to Her Royal Highness Princess Henry of Battenberg, the Order of Isabella the Catholic in recognition of services rendered during the visit of His Majesty and the Queen of Spain.

A TELEGRAM from the Governor of the Mauritius received at the Colonial Office on Dec. 12th states that for the week ending Dec. 12th there were two cases of plague and two deaths from the disease.

A BUST of the late Mr. George Herring will be unveiled at a meeting of the constituents of the Metropolitan Hospital Sunday Fund, which will be held at the Mansion House on June 16th, 1908.

THE library and offices of the Royal Society of Medicine will be closed from the evening of Monday, Dec. 23rd, to Monday, Dec. 30th, at 2 P.M.

## SOME DETAILS CONCERNING THE RECENT ADDITIONS TO ST. BARTHOLOMEW'S HOSPITAL.

ST. BARTHOLOMEW'S HOSPITAL is the oldest medical foundation in London, being the first of the five Royal Hospitals in the City. This venerable institution has existed for close upon eight centuries, having been founded in 1123 by one Rahere or Raherus, whose tomb in the Gothic style of the fifteenth century still stands under one of the Norman arches in the choir of St. Bartholomew's grand old priory church. For the purpose of this foundation Henry I. granted to Rahere a piece of waste land immediately outside the City wall, by the new gate on the Watling Street, and here Rahere erected a hospital, a priory, and a church, dedicating them to St. Bartholomew. The saint's shrine soon became celebrated for the cure of the sick and was the resort of all the afflicted, not, however, in search of medicine but miracles. The buildings, which extended far beyond their present limits in the direction of Cloth Fair, were rebuilt in 1410. At the Reformation they were despoiled by Henry VIII., but later the hospital was re-endowed by him on the petition of Sir Richard Gresham, then Lord Mayor, with an annual revenue of 500 marks, the City agreeing to provide a like sum.

The hospital, with the exception of the main entrance, which dates back to 1702, was rebuilt in its present quadrangular form in 1730 under Gibbs the architect. Since then additions have been made from time to time in order to keep the institution in a state of efficiency to meet its growing needs. It has indeed always taken a leading part in the advance of medical and surgical science. In 1619 Harvey here first expounded his theory of the circulation of the blood. Here also in 1787 Abernethy, then assistant surgeon, established a course of lectures. Students, however, have been admitted to the hospital since 1662, and probably earlier, though the present collegiate establishment was not founded until 1843. Not only is it the oldest but it is the second largest hospital in London, having accommodation for some 750 beds, with an average daily attendance of over 400 out-patients.

The new buildings, erected at a cost exceeding £120,000 partly on land belonging to the old foundation and partly on some acquired from the governors of Christ's Hospital, cover an area of 42,000 superficial feet, having a frontage to Giltspur-street of 163 feet; while, in addition, the foundation stone was laid on Dec. 5th for the new pathological block at the north-west corner by Smithfield. The architects, Messrs. E. I'Anson and Son, have produced an exceptionally well-conceived plan for enabling the hospital staff to deal systematically with the ever-increasing calls upon its charity. The out-patient department is one of the most completely arranged and appointed of any hospital in Europe. The contractors for its erection were Messrs. Dove Bros. The actual foundation of the new building stands on sand and gravel and six inches of impervious material have been laid over the whole site to exclude ground air. Contrary to expectations, during the very deep excavations no relics have been found with the exception of a few coins. The excavations, however, proved the correctness of the general belief that the old building abutted on to old London Wall by discovering the moat that surrounded it. The new building, or rather buildings, may be briefly described as consisting of four more or less distinct blocks of varying height separated by a

number of open areas. They are divided thus: A block at the south-east corner adjoins the quadrangle, while at the other north-west extremity a block fronts on to Giltspur-street; between these is another composed of two somewhat L-shaped buildings connected by a central sanitary tower and staircase. The whole of these are connected together in the basement and ground floor storeys, and also communicate at certain points on the upper floors.

The centre or main block is chiefly devoted to casualty cases and out-patients, and it is the arrangement of this section that is particularly interesting and worthy of commendation. On the ground floor is the large central hall for out-patients. This is approached from Giltspur-street through a bold archway and courtyard and communicates with every part of the building by means of electric lifts, staircases, and corridors. It is, in fact, the heart of these recent additions, measuring 140 feet by 45 feet, is well lighted from the roof, and is capable of accommodating 850 patients, while the ventilation has received very special attention. Opening from it are 21 consulting rooms, one side being for surgical and the other for medical cases. Two small operating rooms and nurses' duty rooms also open into this hall, though placed in the adjoining block. Men and women enter by separate doors and sit on opposite sides of the hall. There is an ample provision of lavatory accommodation. The medical consulting rooms, which form the larger number, have a second door provided for the patients' exit to obviate their return to the waiting hall. This second door opens into a corridor leading to the dispensary waiting hall. On this floor patients are examined and many prescribed for, while others are passed on by means of lifts to one or another of the waiting rooms on the floors above.

On the first floor are situated the out-patients' medical and surgical departments in which patients are seen by the assistant surgeons or assistant physicians. Each department is complete and self-contained, having waiting, consulting, and operating rooms, dressing and sterilising room, and dressers' and surgeons' private rooms. On this floor also are a number of single-bedded rooms for temporary surgical or emergency cases. The second and third floors are devoted to eight special departments—viz., (1) ophthalmic, (2) laryngological, (3) aural, (4) gynæcological, (5) dental, (6) dermatological, (7) electric, and (8) orthopædic—four on each floor, fitted up on a very extensive scale, the whole of the appointments being most complete. The fourth floor contains the clinical lecture theatre and rooms in connexion, accessible by means of lifts or staircases, and opening on to a roof from which there is an external staircase to the ground. In the basement are bathrooms, lavatories, storerooms, and chambers for the administration of medicated vapour and sulphur baths. In close connexion are the boiler house, the machinery for heating and ventilation, the disinfecting chamber, and other offices.

The south-east wing adjoins the quadrangle and is principally used for administrative purposes. The basement contains a large pharmaceutical laboratory for the preparation of the drugs and other things required for use in the dispensary. It is anticipated that several hundred pounds will be saved to the hospital annually by the acquisition of this department. On the ground floor is situated the dispensary, with its waiting room, &c. It is probably the largest of any hospital in the country and, as already stated, is in direct communication with the waiting hall and consulting rooms in the adjoining block. On the first floor is the chemical laboratory for students, adjoining which is a special laboratory for practical instruction in public health. On the second floor over these is the hospital kitchen, a room of fine proportions, being 75 feet long by 23 feet wide, lofty, well lighted, and well ventilated. Electric lifts are provided for services from here to the several dining halls and for the general services of the hospital. Surrounding the kitchen are the sculleries and other necessary offices. A long row of steam-heated caldrons, of such proportions as to require mechanical aid to raise their covers or to empty their contents, occupy two-thirds of one side of the kitchen, the remaining wall space being devoted to huge gas ovens standing some seven feet high, while the other appointments are on a corresponding scale. There is an ingenious arrangement for turning the washings of the caldrons and the condensed water into the drainage system. Cooking will be done here for an average of 900 persons by a female staff under a lady superintendent, and it is hoped to attract to this work a class superior to those usually engaged in domestic service.

The north-west wing, which has a frontage to Giltspur-street and adjoins the medical schools, is a six-storey building, having a stone façade on eighteenth century Classic lines, the reposeful charm of which is well suited to the purpose of the building and is a great addition to City architecture. In the basement is the students' dining hall, fitted with small marble tables, the remaining space being taken up by two rooms for emergency cases—viz., a nurses' duty room and a surgery, already alluded to. In the basement also are four isolation wards for temporary use in doubtful cases. On the ground floor are two common rooms for students, the larger being named the Abernethian room, while the four upper floors are devoted to the resident medical staff, where everything possible has been done for their convenience and comfort. The kitchen serving this block is on the top floor and communicates with the various dining rooms by means of electric lifts.

The building throughout is of fireproof construction and the usual care exercised in modern buildings of this character for the maintenance of aseptic conditions has been observed. Every attention has been given to the means of exit in the event of an outbreak of fire, each block being provided with a staircase at either end, in most cases external or otherwise leading on to a lead flat affording a means of escape. Fire mains have been run up the principal staircases but at present no hydrants have been connected, though it is presumed that these will follow. With such a staff as the hospital possesses, including the resident students, the material is to hand for a most efficient fire brigade.

The following are a few details of the sanitary provisions respecting drainage, water-supply, and ventilation. The drainage and plumbers' work are of a high standard both in conception and execution, but there are not many new departures that call for special remark. This work has been carried out under the architects' supervision by Messrs. Dent and Hillyer. An entirely separate system of drainage has been provided for each block. In only one of these systems are there any manholes within the building and in this case they are provided with double covers. All drains are of iron throughout. A noticeable point is the inspection eye provided on the drain side of all gullies connected with all branches excepting only the very shortest. All baths are fixed clear of the walls and are of one piece of cast iron with best glaze finish. Their bases are bedded into grooves in the impervious floors, safes being dispensed with. They are fitted with accessible wastes and overflows of enamelled copper. There are 120 lavatories and sinks, the fixing and fittings of which vary in many cases, either to suit their special requirements or on account of a preference that the surgeon of a department may entertain for a particular pattern. Again, some are fitted with ordinary quick action screw-down hand valves and some are manipulated by the elbow. The pedal valve, which finds such favour with many surgeons, is not represented. Many of the sinks have their wastes without traps delivering into half-round channels formed in the material of the floor. This is an excellent plan where there is a range of two or more sinks, but seems of little advantage in the case of a single one, while a white glaze channel is preferable to the mottled material of the floor. There are only a few sinks fitted with hot and cold mixing valves. The sinks themselves are mostly of a recent pattern made by the Ajax Co., whose name they bear, but their superiority over older patterns yet remains to be seen. These sinks have no standing waste but a recess at the back opens into the waste-pipe beneath. The water is retained in the basin by a loose vulcanite shutter or sluice kept in position by the water pressure. In some instances the sluice is of brass sliding in grooves. Their weak points seem to be their connexion with the waste-pipe and the questionable durability of the vulcanite web at the sides of the loose shutter. The vulcanite standing waste in the electrical department, where the use of metal is prohibitive, would seem in every way desirable for more general use. There are some specially good metal brackets for the glass shelves in the operating rooms. Some of the scullery sinks are of unusual construction, being of stout iron plates riveted together and galvanised. The ward sinks are of the usual pattern. For the water-supply there are two tank rooms on the roof, each holding two 1000 gallon cisterns (galvanised iron). The supply is, however, constant from the mains. There are in addition other tanks at lower levels containing a similar supply.

The ventilation and heating are divided into two principal systems, for which Messrs. G. N. Haden and Sons are

responsible, working under the architects, the first connected with the waiting hall and adjoining consulting rooms, while the second deals with the remainder of the buildings. In the first system the air, after being screened, washed, and heated by passing over a steam battery in the basement, is forced by means of two powerful fans, capable of delivering 4,000,000 cubic feet per hour if necessary, into the several rooms the air of which it is possible to change ten times per hour. Whether such a rapid change, even of warm air, can take place without causing an inconvenient draught is a question that experience alone can decide. The colder air in the many passages leading into the large waiting hall would render this problematical. This air is conveyed through a large brick-built glazed duct, having branches to the several points of delivery, all of which are accessible for cleansing with a hose, the main duct being large enough for a man to walk through. The vitiated air is extracted through a similar set of ducts, at the floor and ceiling level, by a large centrifugal fan also fixed in the basement and delivered through an upright shaft above the roof. This double extraction is unquestionably a great advance upon the older system. The second system is in connexion with radiators which are heated on what is known as the "rick" system, in which the circulation is accelerated by the admission of steam into the ascending pipe from the heater. This mixing with the water in a small chamber at the highest point of the system creates such a difference in the specific gravity, between it and the descending column of water, from which the steam has been allowed to escape, that a much smaller pipe can be used to convey the water to the radiators, and resistance caused by any unavoidable depression in the pipe will not materially impede the flow as is the case with the old gravitation system. The water is heated in the first case by a steam coil from the main boiler, which is maintained at a constant pressure of about 5 pounds to the inch by automatic valves. The heaters are in duplicate. Fresh air is drawn in and warmed by passing over the radiators, the amount of which can be regulated in each room by a valve. Large ducts formed in the ceilings of the corridors, which ceilings are at a lower level than the adjoining rooms, are connected at the ceiling level with each room, the air from these can be changed five times in the hour if necessary by means of fans working in connexion.

In reviewing the building attention has been chiefly centred upon such points as tend to the maintenance of fresh air and pure water. To comment with any approach to justice upon the various appointments provided in the special and other departments, which generally would seem to be the best of their respective kinds, is not the object of the present article. We can only congratulate the governors of St. Bartholomew's Hospital on the result of their labours and also on their good fortune in securing such effectual support from those who have been intrusted with the execution of their wishes. Looking back to the time when amputations were performed with an axe and the wound was anointed with boiling pitch, say the days of Edward IV., and comparing the provisions made for surgical treatment in the present building the result is certainly gratifying.

## ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held on Dec. 12th, Sir R. DOUGLAS POWELL, Bart., K.C.V.O., the President, being in the chair.

The petition received at the Comitia on May 9th last from the London School of Medicine for Women, praying for the admission of women to the examinations of the College, was then considered. An opinion of the standing counsel to the College was read to the effect that if women were admitted to the examination for the Licence they would also be eligible for the examination for the Membership and would then also be eligible for election to the Fellowship and as officers of the College.

A motion was proposed and seconded that the petition should be granted. To this an amendment was proposed and seconded to the effect that such alterations should be made to the by-laws as will permit of the admission of women to the examinations for the Licence only. After a prolonged discussion this was put to the College with the following result: for the amendment, 59; against, 33. On putting this as a substantive motion an amendment was proposed and seconded that the word "only" should be omitted. On a show of hands a motion for the adjournment of the discussion was carried.

The PRESIDENT then dissolved the Comitia.

## THE HAMPSTEAD GENERAL HOSPITAL.

DURING the present year the position of affairs at the Hampstead General Hospital has been several times brought before our readers and we dealt at some length with the points at issue in THE LANCET of July 13th, p. 107, and July 20th, p. 182. On this latter occasion we reported an extraordinary general meeting of the governors of the hospital to discuss the proposals of its council regarding the question of amalgamation with the North-West London Hospital and the future constitution of its medical staff, and the consequent relations of the hospital with King Edward's Hospital Fund for London and the local opinion of medical men and other residents in Hampstead. At that meeting a motion supporting the present system of staffing the hospital with local practitioners was withdrawn in favour of a motion to adjourn the meeting and to appoint a committee of six governors to inquire into, and to report on all, the points at issue with power to confer with the various parties concerned. The committee, which appointed Mr. H. A. Harben for its chairman and has been at great pains to collect the available evidence, issued a long report on Nov. 26th and on Dec. 2nd the adjourned meeting of governors was held at the hospital, Mr. Edward Bond being in the chair, and about 83 governors being present besides others interested in the result. The report, after fully rehearsing the negotiations which have passed between King Edward's Fund and the council of the hospital, and which we have previously put before our readers, proceeds to make the following recommendations:—

1. That the staff of general practitioners should be replaced by one of consulting physicians and surgeons, with a service limit of 15 years and an age limit of 60, but that the four senior members of the present staff have a service of 18 years from the date of their appointments or from 1894, whichever be the later, although King Edward's Fund had taken exception to this latter condition.

2. That the amalgamation with the North-West London Hospital in Kentish Town (which has had to close its wards owing to lack of support for necessary rebuilding and maintenance) under the financial terms offered by the King's Fund is advisable, the out-patient work to be confined to the Kentish Town building except in so far as it affects casualties, diseases of special organs, and observation of discharged in-patients. The King's Fund guarantees to pay £1500 a year for five years to the amalgamated hospitals with not more than £150 a year rent for the out-patient department and the cost of adapting the North-West London Hospital to this purpose provided the North-West London Hospital hands over its property, less £600 for compensation, to the Hampstead Hospital, and that the latter body appoint not less than three approved members of the medical staff of the North-West London Hospital to its own staff, and two North-West London Hospital representatives to its own council. The committee reported against this last condition whilst considering that every opportunity should be given to the members of the North-West London Hospital staff to compete for the new appointments.

The report further recommends:—

3. That three general physicians, two or three general surgeons, and "specialists" for the usual special departments be appointed, each with a suitable allotment of beds.

The report was signed by five out of six of the committee, although one signatory recorded her dissent to the proposed change of staff, whilst the committeeman in opposition, Sir George Barham, adds a memorandum disagreeing *in toto* with the amalgamation scheme on the ground that it would entirely destroy the local character of the hospital and be of very doubtful financial advantage.

At the beginning of the meeting to consider this report the CHAIRMAN read a long letter from King Edward's Hospital Fund for London, rehearsing the negotiations and setting out the two points still at issue between the King's Fund and the council. The Executive Committee of the Fund further stated that its only desire was "to facilitate a transaction which it was thought might benefit the public and at the same time be agreeable to the subscribers of the two institutions and fair to the medical staffs and officials ....., they have throughout regarded their proposal merely as an offer. Should the subscribers feel that the work which their own generosity provides will be better served by declining the offer made by the King's Fund they may rest assured that the King's Fund fully recognise that the subscribers have an undoubted right to decide as they think best."

After the reading of this letter the matter was keenly debated for two hours, and it was obvious that equally decided opinions were held on either side of the controversy. A full report of the meeting is not called for but its chief points were as follows.

Mr. HARBEN moved the adoption of the report and Mr. FRANK DEBENHAM seconded the motion. They both declared that on the evidence before the committee they could not come to any other conclusions than were embodied in the report.

Mr. ERNEST COLLINS, chairman of the hospital council, said that he accepted its conclusions.

Mr. J. S. BERGHEIM moved that it be referred back to the committee and suggested that three members of the British Medical Association should be added to the committee; he warmly supported the present staff arrangements.

Dr. G. D. PIDCOCK seconded the amendment and complained that no mention had been made in the report of the deputation from the Hampstead branch of the British Medical Association and that the committee had ignored its recommendations. The amendment was put and lost by a large majority.

Mr. HENRY CLARK and Mrs. MEER argued against the proposed change of staff and amalgamation. They wanted a Hampstead not a metropolitan hospital.

Mr. DONALD MACMILLAN, a member of the committee, spoke strongly in favour of its report and declared that even if consultants were kept out, yet there was no unanimity amongst Hampstead medical men as to how the staff should be constituted, and he read a resolution passed by their representatives at a meeting on May 24th to the effect that the amalgamation was desirable from a public point of view. To fill the new beds it would be necessary to take patients from Kentish Town which needed the hospital accommodation urgently.

Dr. E. COLLINGWOOD ANDREWS, on behalf of the hospital staff, absolutely refused to accept the report and made common cause with the professional feeling in the neighbourhood against a consultant staff.

Mr. HARBEN finally answered several objectors to the report and declared that the council had supported the staff throughout.

The meeting, however, rejected the report by 40 votes to 29, whereupon three governors demanded a postal poll of all the subscribers which, as we have announced, resulted in a majority of eight in favour of the report, the figures being 195 for and 187 against it. This decision has been communicated to the staff who are taking counsel with the medical profession in the neighbourhood as to the course of action that they should adopt in the circumstances. The council has power under the constitution of the hospital to act on a bare majority of its governors' votes and we understand that it is prepared to do so. In that case the resignation of the present staff *en bloc* may quite possibly follow, but we understand that no definite conclusion will be reached until after Christmas.

# Looking Back.

FROM

## THE LANCET, *SATURDAY*, Dec. 19th, 1829.

DR. ARMSTRONG.

WE are under the painful necessity of announcing the sad intelligence, that this excellent man and celebrated physician expired at his house in Russell Square, on Saturday last, December 12th, ætat. 46. He has left a beloved wife and excellent mother, and a fine family of seven children, to deplore their irreparable loss. He was a man of most kind disposition, passionately devoted to his family, and seldom or never quitted his home, unless called thence by the duties of his profession. His practice, we believe, amounted to between four and five thousand pounds per annum, and he was decidedly the most successful teacher of the "principles and practice of medicine" in London, his class having consisted, within the last two years, of upwards of two hundred students. We shall give a more extended biographical sketch of the literary and scientific labours of this really great man, as soon as we can obtain those materials which alone can render such a notice valuable.

# ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF THE COUNCIL.

AN ordinary meeting of the Council was held on Dec. 12th, Mr. HENRY MORRIS, the President, being in the chair.

A report was received from the Board of Examiners in Anatomy and Physiology for the Fellowship stating that at the recent examination 109 candidates presented themselves and of these 39 were approved. The report was adopted.

The Court of Examiners reported that 25 out of 63 candidates had been found qualified for the diploma of Fellow. It was resolved to issue diplomas of Fellowship to these.

A report was received from the Board of Examiners in Dental Surgery that 44 candidates had been found qualified for the Licence in Dental Surgery. It was resolved to issue licences to these. A report was also received from the same Board to the effect that it had considered the following resolution adopted by the British Dental Association at its annual meeting, viz.:—

That any regulation prescribing "not less than two years' instruction in Mechanical Dentistry" instead of three years, as heretofore, is seriously detrimental to the efficiency of the profession.

The Board saw no reason to alter its recommendation that the period of instruction in mechanical dentistry should be reduced from three to two years. The Board also recommended that the Dental Department of the University of Leeds should be recognised. The report was approved.

The following resolution from the minutes of the Museum Committee was received:—

That the Council be informed that, in the opinion of the Museum Committee, a systematic course of lectures on advanced surgical pathology, illustrated in part by the specimens in the museum, could be established without difficulty; that the lectures might be delivered by the conservator of the museum, if a pathologist, or by the pathological curator; and that the honorarium might be provided from the Erasmus Wilson fund, the Arnott bequest, and other funds at the disposal of the College.

It was resolved to postpone the further consideration of this resolution.

The Museum Committee suggested certain alterations in the conditions under which the office of conservator should be held. It was decided to advertise the vacant office forthwith and to request candidates to apply before Feb. 1st, 1908. The conditions attached to the post can be learned on application to the Secretary of the College.

Mr. T. Clinton Dent was re-elected a member of the Court of Examiners.

Mr. J. H. MORGAN stated that the Committee on the Annual Report of the Council proposed to postpone to a future meeting of the Council its report on the annual meeting of the Fellows and Members and the resolutions carried thereat.

A letter was read from the President reporting the proceedings of the General Medical Council at its recent session. The letter was received and entered on the minutes. The best thanks of the Council were given to the President for his services as the representative of the College on the General Medical Council.

The PRESIDENT reported the delivery of the Bradshaw lecture by Mr. Rickman J. Godlee on Dec. 6th, the subject of the lecture being "The Prognosis and Treatment of Tuberculous Disease of the Genito-Urinary Organs." The best thanks of the Council were given to Mr. Godlee for his lecture and he was requested to publish it.

A letter was read from Mr. Frederick W. Collingwood calling attention to the tables, presented to the General Medical Council, showing the results of the examinations for the Royal Navy Medical Service, the Royal Army Medical Corps, and the Indian Medical Service, and suggesting that these tables are very relevant to the resolution moved by him at the annual meeting of Fellows and Members. It was resolved to thank Mr. Collingwood for his letter.

The committee to which was intrusted the consideration of the letter from the deans of the medical faculties of the Universities of Leeds, Liverpool, and Sheffield, suggesting the desirability of holding the primary examinations for the Fellowship at other times of the year than May and November, reported that it proposed to postpone its report with the object of ascertaining the views of the several medical schools upon the proposed change before submitting any recommendation to the Council upon the subject.

# Public Health and Poor Law.

## LOCAL GOVERNMENT BOARD.

### REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

#### THE SANITARY CIRCUMSTANCES AND ADMINISTRATION OF VARIOUS RURAL AND SMALLER URBAN DISTRICTS.

DURING the last few months the Local Government Board has issued a large number of reports which give detailed accounts of the results of visits by medical inspectors to rural districts and smaller urban districts in different parts of the country. These reports have in the main a local interest but it is impossible to look through the series without realising how frequently the system of sanitary government by district councils of these areas is found altogether inefficient in practice. The inspectors, after reporting on defective conditions of housing, undesirable or dangerous water-supplies, neglect to supervise cowsheds and milking, and many other matters which become almost monotonous by repetition, nearly always point to the unsatisfactory circumstances of the local public health service as the first matter on which reform is necessary. In many of these reports, combination of a number of adjoining districts for the purpose of securing a single specially qualified medical officer is advocated but unless the Local Government Board can be induced to abandon its well-known objections to compelling the combination of unwilling districts for this purpose it is to be feared that much of the labour expended on these inspections and reports will have been thrown away. In regard to "inspectors of nuisances," or sanitary inspectors as they are generally called, the Board can indirectly bring about improvements by exercising its power of allowing or refusing repayment of half this officer's salary from county funds. But it would appear from these reports that this is often an ineffective weapon, and obviously a district which elects to pay its inspector a merely nominal sum for nominal services has little to lose if the repayment of salary is refused by the Board. From the following reports a few matters of more than local interest have been noted for comment.

*Sherborne Rural District*,[1] *by* Dr. R. W. JOHNSTONE.—This is an important milk-producing district in Dorsetshire. Nearly all the cowkeepers dispose of their produce as milk; few of them make either butter or cheese. About 6000 gallons of milk a day are sent out of this district for retail in London, Aldershot, and other places. In addition, about 1000 gallons a day are made into milk powder at a factory in Sherborne. Little or no attempt is made by the district council to enforce the regulations adopted under the Dairies, Cowsheds, and Milkshops Order. The water available for cooling the milk at the farms often fails to reduce the temperature of the milk below 60° F., and many of the cooling sheds are ramshackle affairs which readily permit the contamination of the milk by dust. "The surroundings are often so filthy that the dairyman has to pass through a quagmire to reach the cooling shed." In one cowshed the normal method of cleansing the shed was to shovel the manure through the windows, leaving the walls inside caked with filth. Uncleanliness and faulty construction of walls and floors of cowsheds were everywhere met with. Milkers as a rule do not wash their hands or cleanse the cows' udders before milking. The large London dairies which deal with farmers in this district usually insist, in their printed agreements, upon the wearing of a clean blouse by the milker, cleansing of hands and udder, and like matters. But no attempt seems to be made to find out if the farmer is fulfilling the conditions of his contract. Dr. Johnstone found that the dairy farmers were more opposed to reform in the personal methods of their milkers than to any proposition in the way of improved ventilation and drainage of the cowsheds. Some of them said that if the regulations on this matter were insisted upon they would abandon dairy-farming. He adds that the sooner men with these ideas abandon dairy-farming the better it will be for the health of the children and others who consume the milk.

[1] London: Wyman and Sons, Fetter-lane; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. No. 285. Price 3*d*.

*Aberayron Registration District*,[2] *by* Dr. W. W. E. FLETCHER.—Inspection of the three districts comprised in this registration area (Aberayron urban and rural and New Quay urban) brought out the fact that the councils concerned completely neglected their elementary duties as to drainage, water-supply, closet accommodation, and other matters, and resulted in Dr. Fletcher raising the question of improving the public health service of the whole of Cardiganshire by the combination of all its contained districts for the purpose of appointing a single medical officer of health. Dr. Fletcher points out that Westmorland has a combination of districts of this kind and that the results contrast favourably with those of Cardigan, in which there are no fewer than 13 medical officers of health who between them receive no more than £380 per annum.

*Tregaron Rural District*,[3] *by* Dr. E. P. MANBY.—The shortcomings of sanitary administration in Cardiganshire are also brought out by this report. Public water-supplies are urgently needed in many parts of the district but the district council has refused to take action even in cases where the cost of carrying out the recommendations of the medical officer of health for this purpose would have been almost negligible. The council has recently appointed as its inspector of nuisances a draper's assistant at a salary of 11*s*. 6*d*. a week. The population of the district is about 8000 and its area is 189 square miles. Dr. Manby takes occasion to point out that the Dairies, Cowsheds, and Milkshops Order applies to all cowkeepers whether they sell milk or only make cheese and butter, although in the latter case there is exemption from regulations made under the Order. Misconception on this matter appears to be prevalent, as reference is made to it in several reports of this series.

*Bourne Urban District*,[4] *by* Dr. F. ST. GEORGE MIVART.—The abundance of water which is obtained in this district wherever the Lincolnshire limestone is bored into has incidentally given rise to some serious difficulties. An artesian well with an abundant yield can be made almost anywhere by sinking a shaft, and owners of houses and business premises naturally prefer this method of supply to resorting to the public service. A great many of these bores are not sealed properly and leakage is freely and constantly taking place into the ground in their neighbourhood. Among other objections to this leakage is the effect upon the sewage of the town. This amounts to more than 60 gallons per head of population in dry weather and the high degree of dilution greatly interferes with the satisfactory purification of the sewage at reasonable cost.

*Huntingdon Rural District*,[5] *by* Dr. R. D. SWEETING.—The sanitary condition of a portion of this district has been adversely affected by neglect to cleanse streams and waterways. In some places, such as Alconbury, serious floods appear to be increasingly common. This frequent flooding causes serious discomfort and inconvenience, and, as Dr. Sweeting points out, it obviously tends to foster the prevalence of rheumatism, bronchitis, and various diseases associated with dampness of sites and dwellings. The streams in question are backwaters of the Ouse and there seems to be no public authority upon which their cleansing depends. The county council disclaims any such duty. The neglected condition of the streams, however, is not confined to the backwaters but extends to the river Ouse itself. After a prolonged litigation on the subject of repair of locks, which terminated by a decision in the House of Lords in 1904, all navigation on the Ouse above St. Ives has come to a complete standstill; the river is ceasing to be navigable and in the absence of dredging and weeding and repairs to the locks a fertile cause of local flooding is created. It may be hoped that the Royal Commission on Canals and Waterways may be able to make effective recommendations to improve the very unsatisfactory conditions which this report discloses.

*Hartley Wintney Rural District*,[6] *by* Dr. J. S. LOW.—In this district of Hampshire, which adjoins Farnborough, it has lately been the custom to receive town children sent by charitable persons for a country holiday. Dr. Low shows that the houses in which these children are received are often insanitary and become grossly overcrowded as a consequence of their visit. He recommends that the local agent who arranges for the housing of the children should be required to give an undertaking that no dwelling should be used for the

[2] Ibid., No. 283. Price 5*d*.
[3] Ibid., No. 284. Price 3*d*.
[4] Ibid., No. 289. Price 3*d*.
[5] Ibid., No. 278. Price 6*d*.
[6] Ibid., No. 288. Price 4*d*.

purpose until the sanitary inspectors are satisfied as to the adequacy of the accommodation for the number proposed to be received. The report also draws attention to the pollution of watercress beds at Crondall and Crookham by overflows or soakage from neighbouring cesspits.

*Winchcombe Rural District*,[7] *by* Dr. S. W. WHEATON.—In the course of this report Dr. Wheaton refers to the building which has lately taken place on the slopes of Cleeve Hill, near the well-known golf course there. Some of these dwellings are served by cesspools the contents of which soak away into the ground, and this method of disposal of sewage is open to considerable risk. The water supply of the houses is obtained from a number of wells of varying depth sunk in gardens or by the roadsides in close proximity to the dwellings. The underlying soil is formed of tumbled masses of rock (inferior oolite) mixed with lias clay. There has been a succession of landslips hereabouts and as a result water is found at varying depths as it is seeking its way to the surface through the débris. In such conditions there is special risk in the proximity of the local wells to leaking cesspools. An outbreak of enteric fever in the autumn of 1906 appears to have been due to specific infection of the drinking water furnished by certain wells which were liable to pollution in this way. Steps are being taken to provide sewers for houses in this part of the district but Dr. Wheaton points out that the risk of recurrence of the disease in existing circumstances is considerable.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7503 births and 4954 deaths were registered during the week ending Dec. 14th. The annual rate of mortality in these towns, which had been 15·3, 16·6, and 16·0 per 1000 in the three preceding weeks, rose again to 16·1 per 1000 last week. During the first 11 weeks of the current quarter the death-rate has averaged 15·4 per 1000, the rate in London during the same period being 14·8 per 1000. The lowest rates last week in the 76 towns were 7·4 in Grimsby, 7·8 in Devonport, 8·3 in King's Norton, 9·3 in Hornsey, and 9·5 in Walthamstow; the highest rates were 23·3 in Newcastle-on-Tyne, 24·0 in Merthyr Tydfil, 24·1 in West Bromwich, 26·6 in Stockton-on-Tees, 27·6 in Rhondda, and 28·9 in Preston. The 4954 deaths in these towns were 32 in excess of the number in the previous week, and included 374 which were referred to the principal epidemic diseases, against 397, 424, and 388 in the three preceding weeks; these deaths included 107 from measles, 95 from whooping-cough, 57 from diphtheria, 47 from diarrhœa, 40 from scarlet fever, and 28 from "fever" (principally enteric), but not any from small-pox. No death from any of these epidemic diseases was registered last week in Tottenham, Norwich, Stockport, Huddersfield, or in nine other of the 76 towns; the death-rates from these diseases, however, ranged upwards to 3·6 in Newcastle-on-Tyne, 3·8 in Tynemouth, 4·5 in West Bromwich, 4·7 in Bootle, 4·9 in York, 5·5 in Merthyr Tydfil, and 5·9 in Barrow-in-Furness. The fatal cases of measles, which had been 91, 105, and 112 in the three preceding weeks, declined again to 107 in the week under notice, and caused death-rates ranging upwards to 2·0 in Stockton-on-Tees, 2·3 in Bootle, 2·7 in Merthyr Tydfil, 2·9 in Tynemouth, 4·3 in York, and 5·9 in Barrow-in-Furness. The deaths from whooping-cough, which had been 72 and 106 in the two previous weeks, fell last week to 95, the highest death-rates from this disease being 1·1 in Northampton, 1·2 in Gateshead, 1·5 in Hastings and in Warrington, 1·6 in Bootle, and 1·9 in Newcastle-on-Tyne. The fatal cases of diphtheria, which had been 70, 82, and 60 in the three preceding weeks, further declined to 57 in the week under notice; the death-rates from this cause ranged upwards to 1·1 in East Ham, 1·4 in Newport (Mon.), and 1·9 in Halifax. Diarrhœa, which has shown a continuously declining mortality since the first week of the quarter, caused 47 deaths last week, the highest death-rate being 2·3 in West Bromwich. Scarlet fever was proportionally most fatal in Walsall, where the rate was 1·1 per 1000; while the deaths referred to "fever" did not give a rate of more than 1·0 per 1000 in any of the 76 towns. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 5686, 5676, and 5581 at the end of the three preceding weeks, had further fallen to 5352 at the end of last week; 500 new cases were admitted during the week, against 597, 623, and 554 in the three preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had risen from 204 to 355 in the five preceding weeks, fell again last week to 348, and were 72 below the number in the corresponding periods of the five preceding years 1902–06. The causes of 32, or 0·6 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, West Ham, Salford, Portsmouth, and in 53 other of the 76 towns; six uncertified deaths were registered in Birmingham, five in Liverpool, three in London, and two each in Sheffield, Preston, and South Shields.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 16·7, 19·3, and 20·6 per 1000 in the three preceding weeks, declined again to 20·0 per 1000 in the week ending Dec. 14th, but was 3·9 per 1000 above the mean rate during the same period in the 76 large English towns. Among these Scotch towns the death-rates ranged from 14·3 in Aberdeen and 16·9 in Edinburgh to 25·2 in Dundee and 25·6 in Leith. The 696 deaths registered in these eight towns were 20 fewer than the number in the preceding week, and included 127 which were referred to the principal epidemic diseases, against 75, 111, and 132 in the three preceding weeks; of these, 71 resulted from measles, 24 from whooping-cough, 18 from diarrhœa, eight from diphtheria, three from scarlet fever, two from enteric fever, and one from cerebro-spinal meningitis. These 127 deaths were equal to a rate of 3·7 per 1000, which was 2·5 per 1000 above the mean rate last week from the principal epidemic diseases in the 76 large English towns. The fatal cases of measles, which had been 33, 43, and 79 in the three preceding weeks, declined last week to 71, of which 43 occurred in Glasgow, 19 in Dundee, six in Greenock, and two in Paisley. The deaths from whooping-cough, which had been 23 and 13 in the two preceding weeks, rose to 24 in the week under notice, and included 10 in Glasgow, five in Leith, three in Dundee, and three in Perth. The fatal cases of diarrhœa, which had been 36 and 21 in the two preceding weeks, further declined last week to 18, of which 11 were registered in Glasgow, three in Dundee, and two in Edinburgh. The eight deaths from diphtheria showed a slight decline from the number in the previous week, and included four in Glasgow, two Dundee, and two in Aberdeen. The three fatal cases of scarlet fever occurred respectively in Glasgow, Edinburgh, and Paisley, the two of enteric fever in Glasgow and Aberdeen, and the death from cerebro-spinal meningitis in Edinburgh. The deaths in these eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 106, 137, and 167 in the three preceding weeks, declined again last week to 161, but were 28 in excess of the number in the corresponding period of last year. The causes of 24, or 3·4 per cent., of the deaths in these eight towns last week were not certified or not stated; in the 76 English towns the proportion of uncertified deaths did not exceed 0·6 per cent.

### HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 18·4, 21·6, and 26·7 per 1000 in the three preceding weeks, declined again to 22·3 per 1000 in the week ending Dec. 14th. During the first 11 weeks of the current quarter the death-rate has averaged 21·4 per 1000, the rates during the same period being 14·8 in London and 14·1 in Edinburgh. The 167 deaths of Dublin residents registered during the week under notice were 33 fewer than the number in the preceding week, and included six which were referred to the principal epidemic diseases, against 10, four, and nine in the three preceding weeks; of these, three resulted from diphtheria, and one each from measles, whooping-cough, and diarrhœa, but not any from small-pox, from scarlet fever, or from "fever." These six deaths were equal to an annual rate of 0·8 per 1000, the death-rate during the same week from the principal epidemic diseases being 0·9 in London and 0·8 in Edinburgh. The 167 deaths from all causes in

[7] Ibid., No. 291. Price 3*d*.

Dublin last week included 27 of children under one year of age and 48 of persons aged upwards of 60 years; these numbers were respectively 18 and 16 below the corresponding numbers in the previous week. Five inquest cases and two deaths from violence were registered; and 71, or 40 per cent., of the deaths occurred in public institutions. The causes of three, or 1·8 per cent., of the deaths registered in Dublin last week were not certified; in London the proportion of uncertified deaths was only 0·2 per cent., while in Edinburgh it was as high as 7·1 per cent.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeon: O. W. Andrews to the *Acheron*. Staff-Surgeon: F. H. Nimmo to the *Osborne*. Surgeons: G. M. Levick to the *Essex*; T. W. Myles to Chatham Hospital; J. McCutcheon to the *Victory*; and H. S. Turner to the *Excellent*. Civil Practitioners: E. P. Calder to be Surgeon and Agent at St. Abb's Head; and P. N. Grant to be Surgeon and Agent in Glasgow.

### ROYAL ARMY MEDICAL CORPS.

Lieutenant O. C. P. Cooke has assumed medical charge of the troops in the Plymouth Citadel area. Colonel H. Martin has been appointed Principal Medical Officer at Hong-Kong.

Lieutenant-Colonel Isaac B. Emerson is placed on retired pay (dated Dec. 17th, 1907).

### ROYAL ARMY MEDICAL CORPS (MILITIA).

Lieutenant F. E. Bissell is seconded, under the conditions of paragraph 41, Militia Regulations, for service under the Colonial Office (dated Nov. 16th, 1907).

### VOLUNTEER CORPS.

*Royal Garrison Artillery (Volunteers):* 1st Cornwall (Duke of Cornwall's): Surgeon-Lieutenant-Colonel W. Mason is granted the honorary rank of Surgeon-Colonel (dated Oct. 30th, 1907). Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel W. Mason, resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated Oct. 31st, 1907). 2nd Glamorganshire: Surgeon-Captain J. L. Thomas, C.B., to be Surgeon-Major (dated Nov. 5th, 1907). 1st Renfrew and Dumbarton: Surgeon-Captain (Honorary Captain in the Army) A. Butler to be Surgeon-Major (dated Nov. 5th, 1907). *Rifle:* 3rd Volunteer Battalion, The Royal Welsh Fusiliers: Surgeon-Captain T. L. K. Davies to be Surgeon-Major (dated Nov. 8th, 1907). 3rd (Dumfries) Volunteer Battalion, The King's Own Scottish Borderers: John Lawson Rankine to be Surgeon-Lieutenant (dated Sept. 1st, 1907). 1st Volunteer Battalion, The Worcestershire Regiment: Surgeon-Captain J. Robinson to be Surgeon-Major (dated Nov. 16th, 1907). 2nd Volunteer Battalion, The East Lancashire Regiment: Supernumerary Surgeon-Major (Honorary Major in the Army) A. A. Watson to be Surgeon-Lieutenant-Colonel (dated Nov. 1st, 1907). 6th (Fifeshire) Volunteer Battalion, The Black Watch (Royal Highlanders): John Hunter Park Paton to be Surgeon-Lieutenant (dated Nov. 18th, 1907).

### THE MILITARY HOSPITAL, STOKE, PLYMOUTH.

Work is in progress at the Military Station Hospital at Stoke for the addition of a wing and the reconstruction of a portion of the existing block of buildings. The quarters for the nursing staff have been extremely limited and the new wing is intended to overcome this inconvenience. It will also be used for administrative purposes, a dispensary, medical inspection room, &c., being provided. The reconstruction of part of the old block is also being carried out for the benefit of the nursing staff. The improvements are estimated to cost several thousand pounds.

DONATIONS AND BEQUESTS.—Under the will of Mrs. Fanny Peach the Nottingham General Hospital will receive £1000 for the endowment of a bed and the Hospital for Incurables, Streatham, and the Cancer Hospital, Brompton, will each receive £500.—Lady Ludlow has received from Mrs. Bowlby a donation of £100 and £54 15*s.*, the amount collected by her towards the building of a new nurses' home for St. Bartholomew's Hospital.—The late Mrs. W. Towgood has bequeathed £1000 to the Bristol Royal Infirmary.—The Royal Dental Hospital has received a donation of £100 from the Worshipful Company of Grocers.

# Correspondence.

"Audi alteram partem."

## THE TREATMENT OF PUERPERAL SEPSIS.

*To the Editors of* THE LANCET.

SIRS,—I have read with much interest Sir William Sinclair's letter on this subject. His allusions to my letter, which appeared in THE LANCET of Nov. 23rd, on "Drainage of the Uterus in Puerperal *Saprœmia*" require a few words from me. He writes as if I were advocating uterine drainage as a routine line of treatment in puerperal sepsis, whereas I prefaced any reference to drainage by a detailed description of the treatment which I adopt in cases of saprœmia, which was the condition I was alone discussing. This treatment, which does not include drainage, is, briefly, complete emptying of the uterus of all retained products of conception and efficient sterilisation of the mucosa by strong iodine application. In the vast majority of cases this will suffice to cure the patient without further local or general treatment. I then alluded to those rare cases, such as the one recorded by Dr. Warden, where the temperature still keeps up, where the *local* infection (in that case bacillus coli) still persists, where the uterine mucosa pours out large quantities of fluid which, of course, become at once infected, and where owing to the inertia and distension of the organ this fluid remains in utero, permitting free absorption of septic products. It is in these cases, as Dr. Warden experienced with his patient on three distinct occasions, that the introduction of an intra-uterine tube for irrigation purposes, however carefully passed, may lead to a slight abrasion of the degenerating mucosa, permitting a rapid absorption of toxins through the resulting wound, a dangerous rigor often following in less than half an hour. I further pointed out that in such an unusual and desperate case temporary uterine drainage had proved effectual and I advocated a specially prepared double rubber tube instead of gauze to serve "as a channel for drainage and for subsequent douching." Continuous uterine irrigation can be kept up by this method or the uterus can be douched every two hours without the danger and inconvenience of introducing an intra-uterine tube on each occasion. The tube need, as a rule, only be kept in for 24 or 36 hours, by which time the uterus will have contracted down, under ergot if necessary, and the local infection will have yielded to the iodised irrigation. There is, of course, no more difficulty in A.D. 1907 in keeping the vaginal and vulvar part of the tube secure against infection from without than in keeping the perineal wound aseptic after puerperal perineorrhaphé.

In this connexion Sir William Sinclair makes two statements to which I cannot adhere—viz., that the fluid in utero in Dr. Warden's case was retained owing to flexion of that organ, and that if a drainage tube were inserted drainage would be from without inwards and not from within outwards. I would ask, however, how can a puerperal uninvoluted uterus, reaching nearly to the umbilicus, resting therefore on the posterior abdominal wall and entirely extra-pelvic, be said to have a "flexion," and even supposing it was flexed and the time-honoured "kink in the cervix," as Dr. Warden puts it, had sufficed to cause retention of the fluid, how would Sir William Sinclair have dealt with it? The inert uterus is very retentive of secretions. A pyometra may exist with a patent cervix.

Then as regards the direction of drainage. That the uterus will empty itself if drained is a fact capable of easy verification. What happens, for instance, when a catheter is passed into a paralysed bladder? Which way is the drainage? What is the difference between a paralysed bladder and an inert uterus in this connexion?

Sir William Sinclair approves of curetting with a sharp curette in cases of saprœmia and septicæmia and objects to my statement that such a procedure should never be done. I believe that removal of the uterine contents, a gentle gauze scrubbing to further remove decidual débris, followed by douching and the vigorous application of strong iodine solution (1 in 4) have much more effect in destroying germs and their toxins than any variety of curettage. Curettage should, in my opinion, never be done for any acute septic condition of the

uterus and I cannot understand the dangerous view apparently implied in the concluding part of the following sentence by Sir William Sinclair: "If the 'uterus should never be curetted with a sharp curette during the ten days following labour,' why should the curette ever be used at all?" This would almost imply that the curette's main use is in septic cases, which I am sure Sir William Sinclair does not mean.

I cannot recall any acute septic condition of the endometrium where curettage with a sharp curette has done good, whether the patient has been puerperal or not. Putting aside the recognised danger of injuring or perforating a puerperal septic uterus by a curette, even in skilled hands, I would ask Sir William Sinclair if he really believes that it is possible to remove the entire septic mucosa by a sharp curette in a distended flabby uterus seven or eight inches long. Is it not evident that many islands of infected mucosa will be left, with the certainty of fresh infection of the areas rawed by the curette? Is the curette not certain to expose to fresh infection thrombosed blood sinuses and veins in the placental site? The first case described by Sir William Sinclair was, as he says, one of profound septic intoxication; in other words, sapræmia. The patient recovered after the treatment advocated by him, including curettage on the sixth day. It is interesting to observe that three days afterwards "parametritis had been found to be a complication of the uterine sepsis." Holding the views that I do as to the dangers of curettage in such a case I think it not unlikely that the parametritis was not entirely a *post hoc* occurrence, for I have seen this condition not infrequently follow curettage in the puerperium.

I am a firm believer in the "protective leucocyte sheet" round an infected uterine mucosa. Sir William Sinclair discredits it. This partly explains the occasional divergence of our views. The parametritic exudation in the first case described by him, where there was local streptococcic infection, was from one point of view a "protective leucocyte sheet" of sufficient dimensions and resistance to prevent the invasion of the general system by the infective streptococci. Fortunately the "sheet" was effectual. Were it not for this "leucocyte sheet" septicæmia would more often follow sapræmia. The terrible mortality of true puerperal septicæmia is due to the fact that there has been no "warning," no time for nature to prepare this "sheet," nor for the formation of a more extended second line of defence, a general hyperleucocytosis. As soon as a means of producing rapidly an efficient general hyperleucocytosis has been discovered we shall be able to approach the treatment of these cases of puerperal septicæmia with hopefulness. Whether this "resistance" will be provided by injecting a satisfactory polyvalent serum, which is probably germicidal in proportion to the leucocytosis produced, or whether bacteriologists will be able to produce, within three or four days from the infection, a specific serum derived from the actual germ infecting the patient, or whether some other agent or method will be used, is for time to show.

Sir William Sinclair has difficulty in determining between cases of puerperal sapræmia and septicæmia. We all have this difficulty and the more we see of these cases the more difficult it is to be dogmatic in the early stages. If, however, a woman confined two or three days previously has increasing pyrexia, a rapid pulse, an uninvoluting tender uterus, with plentiful offensive lochia, one assumes for the moment that it is a case of sapræmia. If in addition one finds that after suitable prompt treatment the temperature and pulse drop permanently to normal and the lochia become and remain odourless the diagnosis is certain. True general septicæmia, *ab initio*, is not usually difficult to diagnose. The real difficulty occurs in those numerous cases where there is a mixed infection, or in cases where from delayed or erroneous treatment sapræmia has developed into septicæmia, or, in other words, where local infection, not only due to saprophytic bacteria, with absorption of the chemical toxins derived from the action of the germs upon the uterine contents and mucosa, has been followed by a successful invasion of the whole system by the pyogenic cocci themselves.

The second case described by Sir William Sinclair is one where placental tissue was left in utero and became infected; acute septic endometritis, salpingitis, and peritonitis followed, and the woman died shortly after admission to the hospital. Here the treatment which had been adopted before admission was worse than useless, the uterus not having been even explored. Such a case only emphasises the advice given by both Sir William Sinclair and myself in the concluding sentences of our letters that prompt treatment as soon as symptoms arise is the essential point, and provided that that treatment does not include the use of the "sharp curette" I think we are otherwise not in serious disagreement.

May I add that I am very glad that this is the case, for I have long looked up to Sir William Sinclair as a brilliant and forcible advocate of measures and legislation tending to obliterate the terrible scourge of puerperal sepsis in our land.

I am, Sirs, yours faithfully,

Manchester-square, W., Dec. 14th, 1907. AMAND ROUTH.

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## THE ARMY AND NAVY MALE NURSES COÖPERATION.

*To the Editors of* THE LANCET.

SIRS,—As honorary treasurer of "The Army and Navy Male Nurses Coöperation" may I be allowed the courtesy of your columns to reply to the writer of the letter signed "W. G. D." which appeared in your last issue?

In answer to his first question I am glad to be able to reply that the Coöperation is now in working order and that nurses of experience and good character, formerly members of the nursing section of the Royal Army Medical Corps, or members of the Sick Berth Staff of the Royal Navy, may be obtained at any time by applying to the secretary at the office of the Coöperation, 47B, Welbeck-street.

As your correspondent truly states, there is no lack of men anxious to be admitted on the roll of the Coöperation. 90 first-class men have applied already for work and it is with the object of helping these deserving men and of preventing them from falling into poverty and want from inability to obtain employment, as has been but too often their lot in the past, that the present association has been formed. Your correspondent desires to know why £2000 are required and why the Coöperation should be placed upon an "eleemosynary basis." To answer the last question first. May I say at once that nothing is further from the wishes or intention of the committee. When the scheme is in full working order it is intended that the deduction (at present 10 per cent.) which is made from the fees earned by the nurses shall be sufficient to defray the expense of management, rent of offices, &c., and indeed all expenses connected with the institution.

In order, however, that the institute may become thus self-supporting it is necessary that a considerable number of nurses should be regularly supplied from its office. But before this can be effected the medical profession and public must become aware of the existence of the institution and of its ability to supply the requisite nurses, a matter which must take some little time. Meanwhile, an office in the medical neighbourhood is required, rates and taxes have to be paid, and the services of a secretary engaged. The existence of the institution must also be advertised in the press and the nurses insured under the Workmen's Compensation Act. For these and similar liabilities, which are estimated at about £500 a year for the first two years, money is required, since it would be unfair to call upon the committee to pledge their individual credit.

Further, experience has already made it clear that if the nurses on the immediate rota for work are allowed to live in their own lodgings scattered throughout London it is impossible to obtain them at a moment's notice when required. On this account the committee desire to rent a small house near by where these men can be provided with cubicles and a sitting room, paying a certain sum each day for their lodging. Here again it is intended that this charge shall be eventually paid by the deduction made from the nursing fees, but meanwhile the expenses of the house will have to be met and a sum for furnishing must be provided.

To meet all the initial expenses thus enumerated it is estimated that a sum not far short of £2000 will be required, a sum, it is interesting to note, not very dissimilar from that actually found necessary in starting one of the similar institutions referred to by your correspondent. It is far from the committee's wish or intention to lay another permanent burden on a long suffering and generous public. If the Coöperation is to be a success it must be self-supporting. But they do appeal for help in *starting* the institution, so that they may be able to place it on a permanent basis, and thus bring help to many a deserving nurse who has served his country well, but who on leaving the service finds under

present conditions no means of following the employment which he has been taught, and who thus sooner or later drifts into the despairing army of the unemployed.

I am, Sirs, yours faithfully,

P. HORTON-SMITH-HARTLEY.

47B, Welbeck-street, Cavendish-square,
London, W., Dec. 10th, 1907.

## EPSOM COLLEGE FOUNDATION FUND.

*To the Editors of* THE LANCET.

SIRS,—From time to time the treasurer of Epsom College has considered it to be his duty to make a special appeal to every member of the medical profession on behalf of the foundation attached to the College. I find, however, that such a general appeal has not been made since the year 1898 and it is only the present urgent need of funds that compels me now to follow the practice of my predecessors.

The foundation of Epsom College gives annuities of £30 each to 50 aged members, or widows of members, of our profession and provides gratuitously a high-class education, with clothing and maintenance, for 50 necessitous sons of medical men—a sum of £7000 a year being required for these purposes. The need of help is specially urgent at the present time, for almost all the investments belonging to the General Purposes Fund had to be sold recently in order to meet a heavy outlay on sanitary and drainage works at the College. I feel justified in making this appeal for two reasons. In the first place, death removes many supporters every year, and as the Council relies almost entirely upon annual subscriptions and donations for the maintenance of the charitable work it is necessary that fresh supporters should come forward to fill these vacancies. In the second place, the marked improvement in the standard of education generally which has occurred of late has resulted in a material increase in the cost of the foundation scholars, hence the council could not continue to maintain the full number should the annual income from contributions decline.

It is hardly necessary for me to remind you that many members of our profession are unable, owing to their small incomes, to make suitable provision for themselves in the event of prolonged illness or permanent incapacity from ill health, whilst in the event of their own death their families are too often left very poorly provided for, and sometimes with no provision whatever. I appeal with confidence to medical men who have not yet supported the foundation to become annual subscribers, however small the amount of their contributions may be; and whilst thanking those who have generously rendered assistance in the past, I would ask them to do all in their power toward enabling the council to continue to maintain the full number of pensioners and foundation scholars. Further, I would urge upon all members of our profession to bring the claims of the foundation before their well-to-do patients, in view of the fact that so many medical men succumb in early life to diseases or accidents arising in the pursuit of their calling. The present appears to be a suitable opportunity to ask the public to show their appreciation of the work done by the medical profession in the services, in preventive and tropical medicine, and in gratuitous attendance on the poor in hospitals and elsewhere.

I would add in conclusion that this foundation is sometimes spoken of as a "South of England Charity." That this is far from being the case will be seen when I mention that our pensioners and foundation scholars are often elected from distant parts of England, Wales, Scotland, and Ireland, whilst at the present time we have pensioners residing in France, Western Australia, and South Africa.

I am, Sirs, yours faithfully,

HENRY MORRIS,
Treasurer.

37, Soho-square, W., Dec. 14th, 1907.

## FORMIC ACID AND THE FORMATES.

*To the Editors of* THE LANCET.

SIRS,—Mr. H. G. Higgins has certainly unearthed a most quaint and amusing item of organic therapeutics as practised in the days of Sydenham. There are, of course, in early works on medicine many allusions to the value of ants as a remedy. My quotation from Harper's "Medical Dictionary" of 1839 was to show that, although formic acid was known in the early nineteenth century, its connexion with antique pharmacology and its possible utility as a drug were unrecognised at that date. Mr. Higgins's criticism of my remarks on the lethargy of ant-eaters seems almost to suggest that they are addicted to a vice in making ants their prey, but the claims set forth in France might lead one to expect from formic acid not merely stimulation but results comparable to the alleged effects of the preparations of Poehl or Brown-Séquard I am indebted to Professor Frazer for the following quotation from a French work, "Chez nos Indiens: Quatre Années dans la Guyane Française," by H. Coudreau (Paris, 1895): "Applied to man, the *maraké* (i.e., the exposure to stings of ants and wasps) sharpens them, prevents them from being heavy and lazy, makes them active, brisk, industrious, imparts strength, and helps them to shoot well with the bow. Without it the Indians would always be slack and rather sickly, would always have a little fever, and would lie perpetually in their hammocks. As for the women, the *maraké* keeps them from going to sleep, renders them active, alert, brisk, gives them strength and a liking for work, makes them good housekeepers, good workers at the stockades, good makers of *cachiri*. Everyone undergoes the *maraké* at least twice in his life, sometimes thrice, and oftener if he likes. It may be had from the age of about eight years and upward, and no one thinks it odd that a man of 40 should voluntarily submit to it." This rivals the panegyrics of Clement and Salmon, and indeed one begins to wonder if the preparation from the fresh insect possesses properties superior to the commercial product, so widespread on investigation are these accounts of the medicinal value of ants. From the above quotation it would certainly appear that the natives of French Guiana find ant-bites and wasp-stings have a more lasting effect than mere "stimulation" could produce. Personally, as I remarked in my first letter, I found formic acid of little value in "neurasthenia" (which term is a choice example of what the Germans call "ein schlagwort"). But as a remedy for dropsy, using it after pushing digitalis and theocine sodium acetate to the verge of safety, I found it unmistakeably effective.

Dr. Harry Campbell, to whom we are indebted, in this country at any rate, for calling attention to theocine sodium acetate, writes to me pointing out that the homœopaths employ the sting or other part of the bee for the cure of dropsy and that he has "seen dropsy rapidly disappear after this weird remedy." The preparation I found useful for anasarca was Duncan and Flockhart's "Elixir of the Formates with Strychnine," which I gave in two-drachm doses three times a day, being the equivalent of four grains each of calcium and sodium formate and one-fiftieth of a grain of strychnine formate.

In the current number of THE LANCET (Dec. 14th) is to be found, opportunely enough, an abstract of a paper communicated to the Edinburgh Medico-Chirurgical Society by Dr. A. Goodall and Miss Isabel Mitchell, B.Sc., containing many interesting observations on the action of certain salts of formic acid on the circulatory and muscular systems. Their conclusions are worthy of note.

I am, Sirs, yours faithfully,

Hampstead, N.W., Dec. 17th, 1907. J. S. MACKINTOSH.

## PLEURAL EFFUSION AND ITS TREATMENT.

*To the Editors of* THE LANCET.

SIRS,—Being in one of my lighter moods this evening I take pleasure in replying to the criticism of Dr. Harry Campbell in THE LANCET of Nov. 30th. I think it was the late Robert Lowe who said that it did not matter very much what one says so long as you understand what he means. Dr. Campbell understands perfectly well what I mean, but he is afraid that some less astute individual may fall into confusion—a confusion which is largely manufactured by Dr. Campbell. He draws a nice subtle distinction between the tautness and elasticity of the lungs, but he fails to explain to those readers who are likely to fall into confusion that the two terms are practically synonymous in healthy lungs with which I was dealing. What makes the lung taut but the atmospheric pressure within it, and the more taut or stretched the greater will be its elasticity or tendency to recover its form after being stretched. It is true that if you keep a piece of indiarubber stretched for a lengthened period it will lose its elasticity, but at the same time it will cease to be taut. No doubt "the elasticity and tautness of a substance are two quite different things." A billiard ball, for instance, is very elastic, but it might be difficult to make it taut.

In order to support these little fine distinctions in the description of pulmonary physics Dr. Campbell conjures up the imaginary case of "the lungs abundantly seamed with fibrous tissue in a state of cicatricial contraction" and *the pleuræ non-adherent*. Did ever anyone meet with such a case? He assumes that when there is marked dyspnœa in such a case "a struggle ensues between the contracting cicatricial tissue, tending to a diminution in the size of the thorax, and the powerfully acting inspiratory muscles ever striving to effect an increase in the mean size of the thorax. In the struggle between these opposing forces victory may belong to the one or the other set, with the result that the thorax suffers a decrease or an increase in its mean size, but in either case the elasticity of the pulmonary tissue is considerably subnormal, while the minus intrapleural pressure is greatly exaggerated (I am assuming the pleuræ are non-adherent)." As a piece of academic reasoning from nicely manufactured facts I am quite willing to admit that Dr. Campbell is correct, but in cases of fibroid lung there are no powerfully acting inspiratory muscles; any dyspnœa is represented by quick, short, and shallow inspirations; the pleuræ are adherent; any stretching of the lungs is caused by the pressure of the air within them and they are no more pulled out by "powerfully acting inspiratory muscles" than the 56 pounds weight in my experiment is pulled up by the book-shelf and vaseline. If the lungs have lost their elasticity and are stretched they remain stretched; an emphysematous lung is not elastic, neither is it taut, although it is stretched.

Dr. Campbell strongly objects to the phrase "traction on the thoracic walls," because some physicist told him that the lungs could not exert traction on the circumjacent structures unless anatomically attached to them. Well, what next? The moon is held in its orbit by the *attraction* of the earth without any such connexion. Without any great stretch of the imagination or misuse of language I might say that this letter has been *drawn* out of me without any *axis-traction* forceps by the demure but somewhat *attractive* personality of Dr. Campbell. Should he wish to improve the English language by giving a definite and limited meaning to each word I should advise him not to start etymologically, because the ancient Greeks and Romans allowed almost as much *elasticity* as we do to the significance of such words as ἐλαστικός, ἐλαύνειν, ἐλατηρ, *trahere*, *tractus*, &c. The English language is sufficiently *elastic* and quite explicit enough for my purpose; it enables me to say what I mean, and I always mean what I say, notwithstanding that Dr. Campbell presumes otherwise.

I perfectly understand what he means by "*pulmonary suction*" and I have no wish to cavil with the term, but is it any great improvement on *traction?* The terms *force of traction*, *line of traction*, and *angle of traction* are very definite and well understood, but is there any such force as *suction?* Does the fluid rise up in the tube of a *suction pump* against the *attraction* of gravity by any unknown force called *suction*, or rather is it not simply driven up by the pressure of the atmosphere? *Suction* is merely a negation, a disturbance in the balance of pressure which enables another force to do some work. I should like to see Dr. Campbell's thorax *sucking* some air out of a partial vacuum in which the pressure had been reduced to, say, 300 millimetres of mercury. This is a little experiment which might amuse him some long winter's evening. There was no suction between the bookshelf and the 56 pounds weight, and the only object of the vaseline was to exclude the air, yet when I raised the bookshelf the 56 pounds weight followed it.

He conceives that "the essential purpose of pulmonary tautness is to exercise *suction* on the exterior of the heart and thus facilitate the diastole of its chambers, especially of the auricles, and the right auricle more especially; pulmonary *suction*, in fact, *sucks* blood into the heart." This view was well illustrated in Dr. Campbell's excellent lectures on Respiratory Exercises and Pulmonary Physics, but it is merely an elaboration, or an attempt at an elaboration, of the work of Carson, of Barry, of Andrew Buchanan, and of Patrick Black without any acknowledgment of those worthies. Perhaps Dr. Campbell did not know of their former existence, because in his preface he says: "I am led to publish these lectures because in them are set forth for the first time certain principles which I believe to be important."

So much for Dr. Campbell; now for Mr. Graham Simpson. I am very sorry that in my facetious, but true, criticism of the surgeons I should have so grievously offended this gentleman. In this connexion I cannot help quoting a joke which was perpetrated by Dr. Dawson Williams: "In view of what you say about the surgeons it is perhaps as well that you know how to encounter, on sound principles of physics, a man who is 'making indiscriminate use of a knife.'" It is at present no business of the physicians to treat empyema, but I see no reason why they should not invade the territory of the surgeons. The principles of treatment are well understood and it is now largely a question of technique. My friend Mr. Damer Harrisson recently carried out my principles on a nephew of his own with rapid success. He found that a short tube afforded better exit for the pus than gauze, but the pus was driven out by the expiratory expansion of the lung rather than drained out, and he was very careful about preventing the admission of air to the pleural sac.

A short time ago I was speaking to a man who stands in the very front rank of operating surgeons and he frankly acknowledged that the surgery of the thorax was a weak spot. The first point in the improvement of an operation is to recognise its defects, and it is from such a man as this that I hope for an advance rather than from the self-satisfied individual who thinks that everything is for the best in this best of all possible worlds. I am pleased to say that there are a good many of my surgical friends—their name is legion—trying to improve the treatment of empyema, but I would like to take this opportunity to draw attention to an admirable paper on the treatment of purulent cavities by Mr. Robert H. Woods which was published in the Transactions of the Royal Academy of Medicine in Ireland, Vol. XXIII.

I am, Sirs, yours faithfully,

Liverpool, Dec. 10th, 1907. JAMES BARR.

## THE ALLEGED DISCOVERY OF SYPHILIS IN PREHISTORIC EGYPTIANS.

*To the Editors of* THE LANCET.

SIRS,—When M. de Morgan published his "Recherches sur les Origines de l'Egypte" (Paris, 1896 and 1897), considerable interest, not unmixed with scepticism, was aroused by the statements of Dr. Fouquet who wrote the anthropological appendix to that work, describing the occurrence of numerous syphilitic lesions in the crania and long bones of the prehistoric skeletons submitted to him by M. de Morgan. Professor Flinders Petrie had found similar injuries on many of the prehistoric bones found by himself and Mr. Quibell ("Nagada and Ballas," London, 1895), but he regarded them as evidences of cannibalism—as the results of the gnawing of human beings.

In the year 1901 I began the study of Egyptian anthropology by examining *in situ* the remains of 500 prehistoric bodies excavated at Naga-ed-dêr by the Hearst Egyptian expedition of the university in charge of Dr. Reisner; and every year since then I have examined many hundreds of bodies of every known historical period. During my first week's work at Naga-ed-dêr I was able to determine the true nature of these so-called "syphilitic" or "anthropophagic" lesions and in the last six years I have been able to confirm the accuracy of the explanation that I have to offer in many hundreds of cases. The damage in question is almost always found on the under side of the bone as it lies in the ground and if the soil be carefully examined after such a mutilated bone has been removed one or more small burrows will be found leading to the "ulcer" or hole in the bone. If some of this soil around a burrow or from the edges of the "ulcer" be examined microscopically fragments of beetle's elytra will be discovered. There can be no doubt that beetles or their larvæ are responsible for the causation of these supposed syphilitic lesions and that the latter are produced long after the bones have been buried.

These observations have never been published hitherto because I imagined that there was no call for the refutation of statements which seemed to have attained the euthanasia of silence. But recently a distinguished French scientist has lent the weight of his great reputation to the rehabilitation of Fouquet's extraordinary error and has given wide publicity to a description of supposed syphilitic ulcerations on prehistoric Egyptian crania which anyone who has studied the damage done by beetles cannot fail to recognise as such. He gives a detailed and perfectly accurate description of the injuries and explains the absence of induration and inflammatory reaction around the "ulcers" by the "rapidity of the disease" and the "early death" of the subject!

I think that the time has arrived for pricking this bubble once for all, for the dissemination of this report can only give unnecessary trouble to the writers of the history of medicine. In exposing this fallacy I do not pretend to deny that syphilis may have occurred in Egypt in ancient times; all that I can state is that among many thousands of ancient Egyptian skeletons I have never met with a single case which competent observers will agree to call undoubted syphilis.

I am, Sirs, yours faithfully,

G. ELLIOT SMITH.

Anatomical Department, The School of Medicine, Cairo, Dec. 7th, 1907.

## OBSTETRIC RARITIES IN GENERAL PRACTICE.

*To the Editors of* THE LANCET.

SIRS,—In making brief reference to the following cases it is simply to draw attention to the somewhat infrequent occurrence of such consecutive rarities. Even in hospital practice I do not think such a sequence is by any means common, but in private practice I should imagine it is extremely unusual. Hence my record of them. To be brief, they were a placenta prævia, a carneous mole, and an hydrencephalocele, the three occurring on consecutive days. In neither case was there any special feature worthy of particular comment, except the fact that the hydrencephalocele was one of precipitate delivery. This, I take it, is most unusual in so much as at least one cranial diameter (in this the suboccipito-bregmatic) was materially increased. When called to the case I found the child lying dead in a "chamber" which was half full of blood. The cord had ruptured and I am of opinion that death was due to loss of blood. In the occipital region was a large tumour which proved on examination to be a hydrencephalocele. On dissection I found the subarachnoid space full of fluid and the greater part of both hemispheres with much dilated ventricles projecting into the sac through an almost circular hole in the supra-occipital. On introducing the finger the tentorium could be felt below.

With regard to the placenta prævia, I think the fact that the placenta, although almost central, was with no great difficulty displaced, allowing of a comparatively easy application of forceps, might also bear passing reference. In this case I had thought of turning, but the desire to hasten the termination of the labour suggested to me immediate instrumental interference. The mother made a good recovery but the child being premature (six and a half months) only lived six hours. The case of carneous mole presented the usual history. I first saw the patient on Oct. 1st, when she was presumably in her fourth month of pregnancy. On that date she had a "show." I saw her again on Dec. 5th, when she had had another "show." She had never felt any movements. Next day something came away, which, as might have been anticipated, proved to be a carneous mole. Possibly I have been somewhat prolix in my remarks concerning the above occurrences, but, as I have before mentioned, I think their rarity as a sequence in private practice warrants their description.

I am, Sirs, yours faithfully,

EDWARD TOWNSEND TUCKEY, M.B. R.U.I.

St. Stephen's-road, Bow, Dec. 10th, 1907.

## ANTHRAX-INFECTED CARCASS AS HUMAN FOOD.

*To the Editors of* THE LANCET.

SIRS,—The following may be of interest as an instance of the carcass of a bullock affected with undoubted anthrax having been eaten apparently without ill-effects; and also of the practice too prevalent in country districts, of a sick animal being slaughtered, as it is said, "to save its life," so that it might be sold for human food.

A man was admitted into the Royal Surrey County Hospital on Nov. 26th suffering from malignant pustule of four days' growth, on the anterior aspect of the left forearm. The pustule was excised and from it a smear was taken for direct examination and aerobic cultures in broth and on serum were made, both methods revealing the presence of anthrax bacilli. The man reluctantly gave a history of having assisted a butcher in dressing a bullock which had been found to be very ill on the morning of Nov. 9th and which had been hurriedly slaughtered by a neighbouring cattle-dealer as it lay in the shed. A butcher who is in a large way of business in a neighbouring district was sent for to dress the animal, and he bought the whole of the carcass. He remarked that the spleen was about eight times the normal size and left it on the premises for the owner to examine. This spleen was subsequently unearthed by the county veterinary inspector who found the anthrax organism in smear preparations. The butcher denied noticing that the blood was dark in colour and asserted that the animal was well nourished and that the flesh appeared perfectly sound. He first cooked a piece of the meat for his own table and finding nothing abnormal in the taste proceeded to sell the remainder. No case of illness has been reported as attributable to the meat, but it was found impossible to obtain a list of the customers to whom it had been sold. As previously mentioned, the pustule was first noticed exactly a fortnight after the handling of the carcass. It subsequently transpired that another man who assisted the butcher at the same time and who had cut his thumb the day before and injured the other thumb during the handling of the carcass developed symptoms of septicæmia a week later—i.e., on Nov. 16th—and died on Nov. 19th.

It is anomalous that the only way the matter could be brought home to any of the parties concerned would be by prosecution of the owner by the County Council for failing to notify the occurrence of anthrax on his farm. He, of course, pleads ignorance of the nature of the illness; even then there remains the fact of the animal, whilst obviously moribund, being slaughtered for human food. The local authority can only deal with unsound meat by having it actually seized and condemned. As all the meat in this case had been eaten before the facts came to light no punishment, except that of publicity, seems possible.

I am, Sirs, yours faithfully,

R. W. C. PIERCE,

Guildford, Dec. 14th, 1907. Medical Officer of Health.

## A CASE OF SELF-INDUCED (?) ABORTION.

*To the Editors of* THE LANCET.

SIRS,—Dr. A. B. M. Thomson in THE LANCET of Sept. 7th asks under this title if it is possible for a woman to introduce into her uterus without causing injury to the vaginal walls or os a straight rigid rod four inches in length. During the last 12 months I have had two cases of the kind. In one a girl introduced a bone crochet needle five inches long into the uterus and successfully induced abortion at three months. I removed the needle and she aborted the next day and did well. In another case a married woman introduced a large hair-pin, four inches long, points upward, into the uterus and lost it. I dilated, removed the hair-pin, and curetted. She was six weeks pregnant. A week later she developed acute pelvic peritonitis and had to be opened and drained through the abdominal wall and Douglas's pouch and eventually did well.—I am, Sirs, yours faithfully,

Dubbo, Oct. 22nd, 1907. WILLIAM DAISH, M.D.

## THE OPHTHALMOMETER AND ITS LIMITATIONS.

*To the Editors of* THE LANCET.

SIRS,—In the interesting annotation under the above heading which appeared in THE LANCET of Dec. 7th there are some statements which seem to require amplification.

First, as to the claim that the ophthalmometer "was designed by Helmholtz for measuring the refracting surfaces of the eye," I would point out that, many years before, the curvature of the living cornea had been ascertained by the immortal Thomas Young, and described in his classical work "On the Mechanism of the Eye," published in the Philosophical Transactions for 1801. He measured the diameter and height of his own cornea, viewing it in a mirror, and from the chord and sagitta so obtained he calculated the radius of the corneal sphere to be $\frac{3}{10}$ths of an inch (7·87 millimetres). His striking accuracy is shown by the fact that it is the mean of later investigations which have limited the variations to between 7·2 and 8·4 millimetres. But although Young's work suffices for our knowledge of the cardinal points of the dioptric system the procedure could not be employed clinically.

Modern ophthalmometry is based on the physical properties

of convex mirrors. As is generally known, in these the image is erect, diminished, and virtual, being placed behind the surface. The cornea acts in the same way, and, *en passant*, let me point out that the Hebrew name for the pupil (*ischon*, a little man) and our own word pupil (Latin, *pupilla*, diminutive of *pupa*, a doll) owe their origin in all probability to the tiny erect image of themselves seen in the plane of the iris by the ancient philosophers. In ophthalmometry an object, or two luminous points (mires) demarcating the extent of the object, is placed before and at a known distance from the eye. The corneal image is then magnified and examined by means of an astronomical telescope. The size of the image is measured directly, or by the method of "doubling." Knowing these quantities, it is easy to calculate the fourth by the rule that "the object is to the image as twice their distance apart is to the required radius."

Now, in 1840, there appeared in Oken's Isis. Jahrg., S. 886, an article by Kohlrausch, entitled "Ueber die Messung des Radius der Vorderfläche der Hornhaut am lebenden menschlichen Auge." He also had obtained a radius of 7·87 millimetres by means of an apparatus consisting of an astronomical telescope of short focus on either side of which was a candle. The focal plane of the eye-piece bore two parallel spider threads which could be relatively moved by means of a screw. The threads were made to bisect the images and so the observation was completed. Curiously enough, his work has never been generally known, although it was described by Schiötz in the "Dictionnaire Encyclopédique des Sciences Médicales" in 1881, republished in Javal's "Mémoires d'Ophtalmometrie" in 1890, while in that magnificent work, the "Encyclopédie Française d'Ophtalmologie," 1904, Sulzer, in the chapter on Ophthalmometry in the third volume expresses himself as follows: "Les ophtalmomètres actuellement en usage sont des modifications de l'instrument de Kohlrausch."

It was not until 1854 that Helmholtz applied to the instrument the plane-parallel plates, already used in the heliometer for measuring the heavenly bodies. Great a step as it unquestionably was in the evolution of the ophthalmometer, Helmholtz did no more than graft upon it a principle long used elsewhere. The discoveries of the illustrious scientist are so abundant and fruitful that in seeking material wherewith to weave a wreath in his memory there is no need to pluck the hard-won laurels of others.

The second point refers to the discrepancy between ophthalmometric and total astigmatism being referred to the lens. Beyond the patient and laborious investigations of my friend and teacher Dr. Tscherning of the Sorbonne I know of none which can claim to deal with this matter from actual observation. He found that lenticular astigmatism played but a small part and that the main portion can be attributed to three separate agencies: (*a*) The greater refractivity of the cornea as compared with the aqueous humour which changes an astigmatism "with the rule" of the first surface to one "against the rule" of the second, because the second must act as a negative lens. (*b*) The ophthalmometer measures the power of the cylinder which, *in contact with* the cornea, would correct first surface error. Obviously, this lens cannot be worn there and when it is transferred to the trial frame we introduce an "error of separation" which increases directly with both the power of the cylinder and its distance from the cornea. The error may reach several dioptres but it can be computed. The fact that it is seldom thought of must be my excuse for drawing attention to it. (*c*) The fact, also but little known, that the refraction is not the same throughout the pupillary space. I am not now alluding to the visual and paracentral zones of the cornea, but to the total measurements made by means of a luminous point. At the Sorbonne it has been found practically impossible to get theoretically perfect correction.

When, therefore, we hear of discrepancies we must bear in mind that the standard to which they are referred is at best an approximation.

I am, Sirs, yours faithfully,

WILLIAM ETTLES, M.D. Aberd., F.R.C.S. Edin.

Weymouth-street, W., Dec. 9th, 1907.

*** We are well aware that the radius of the cornea had been measured before v. Helmholtz invented the ophthalmometer. As Dr. Ettles admits, the credit of applying the principle of doubling the image to the problem of measuring the curvatures of the refracting surfaces of the eye belongs to v. Helmholtz. Since this is the fundamental principle of the ophthalmometer and since its application enabled v. Helmholtz not only to confirm previous observations but also to widen the field of investigation in a notable degree we consider that we were amply justified in stating that the instrument "was designed by v. Helmholtz for measuring the refracting surfaces of the eye." We go farther and have no hesitation in affirming that v. Helmholtz was to all intents and purposes the inventor of the ophthalmometer, just as Tscherning is rightly regarded as the inventor of the ophthalmophacometer. It must have been obvious to readers of our annotation that we did not imply that lenticular astigmatism is the sole "limitation" in the use of the ophthalmometer. Dr. Ettles will doubtless remember that Thomas Young, besides measuring the curvature of his cornea, also measured his own astigmatism and proved that it was lenticular and not corneal. Lenticular astigmatism is one factor in the problem; the others which Dr. Ettles has mentioned emphasise the limitations of the instrument for clinical use.—ED. L.

## ACUTE PULMONARY ŒDEMA.

*To the Editors of* THE LANCET.

SIRS,—The striking clinical phenomena described by Dr. Leonard Williams in his paper on Acute Pulmonary Œdema in THE LANCET of Dec. 7th are certainly as worthy of detailed treatment in text-books of medicine as some other evidences of disordered function which, for lack of more complete knowledge of their essential nature, have been allotted a special place in a symptomatic nomenclature. I gather, however, that Dr. Williams does not so much insist that the syndrome which he has so graphically and tersely described should go to swell such evidences of our ignorance as are so eloquently expressed by such terms as tachycardia, bradycardia, and Graves's disease, as that an acute and swamping œdema or bronchorrhœa should be described in more detail in text-books in connexion with the various pathological states with which it is associated and of which it may be a very grave and urgent symptom.

As a mode of death or of threatened death in heart disease it is well worthy of special notice, and in all cases, I imagine, there can be little doubt, as Sir James Barr suggests in THE LANCET of Dec. 14th, that it is an expression of cardiac failure. Dr. Williams would seem, in his paper, to exclude syncope as the cause of the excessive bronchorrhœa which he describes. The œdema was, evidently from the conditions found post mortem, transient though fatal. It is my belief, however, that had Dr. Williams been present when the patient first cried out in the alarm of "air hunger" he would probably have found that the initial event in the case was threatened death in cardiac diastole. That the heart recovered itself somewhat afterwards is, of course, in accordance with what is frequently witnessed, but that it was severe enough and lasted long enough, so to impede the pulmonary circuit as to induce the symptoms he describes, I am convinced from my own experience. The aggravation of the symptoms, moreover, on recumbency and the rapidly supervening unconsciousness of the patient appear to me to support this view of the cause of the phenomena for the orthopnœic position sought for by the patient under these circumstances is an instinctive attempt to moderate the inflow into an already surcharged right heart.

Aortic regurgitant lesions are, we know, those most frequently associated with sudden death in heart disease, and the physics of the circulation in these cases seem to indicate caution in the use of some instrumental methods to determine blood pressure. Personally, I never feel comfortable in my own mind in applying, for example, the Riva-Rocci instrument under these circumstances without securing sufficient rest for the patient beforehand. I do not expect this view to be shared by all, but the strangling of a considerable portion of a limb even for a short time in aortic regurgitation is, to my mind, a procedure not to be undertaken without precaution. It is, moreover, one which is usually a novelty to, and sometimes excites, a patient. There are also other conditions not primarily cardiac in which a swamping bronchorrhœa is witnessed. Your correspondents (Dec. 14th) have referred to some of these. I also have witnessed this state when pleural effusions have been

withdrawn in cases in which from long compression the resiliency of a lung has been destroyed and the organ rendered incapable of filling by expansion in more or less degree the vacuum created. But in such cases, also, the condition is, I think, cardio-vascular, not pulmonary; it is a cardiac rather than pulmonary paresis, as Sir B. W. Richardson suggested and Sir James Barr recalls.

But, etiology apart, Dr. Williams has done good service in calling attention afresh to this state and it is to be hoped that the hiatus in text-books to which he has referred will now be filled.

I am, Sirs, yours faithfully,

ALEXANDER MORISON.

Upper Berkeley-street, W., Dec. 16th, 1907.

## PUBLIC VACCINATION IN OLDHAM.

*To the Editors of* THE LANCET.

SIRS,—A representative meeting of Oldham medical men have had under consideration the proposed terms of appointment of a public vaccinator for the township of Oldham, and they wish to point out the following facts in regard to the proposed appointment:—

A short time ago the guardians thought of appointing such an officer at a fixed salary of £500 per annum, and binding him to devote the whole of his time to the duties of the office, and this proposal received the approval of Dr. S. W. Wheaton, the Local Government Board inspector. This proposal, however, was not carried out because the Local Government Board then reduced the fees for successful public vaccination from 5*s.* per case to 2*s.* 6*d.* per case, but the said officer to be paid the minimum scale of fees—namely, 2*s.* 6*d.* per case—allowed by the Local Government Board, and to be allowed £15 per annum for a central vaccinating station, and also to be allowed the necessary dressings. Taking as a basis the amount of public vaccination done by the present interim public vaccinators during the six months ending Sept. 30th, 1907, we are advised that the proposed officer could at the most earn £200 per annum. Matters are now even worse than this, for under the recent Act of Parliament increased facilities for obtaining exemption orders have been provided and possibly as a result of this the amount of public vaccination in the town has decreased, we are informed, to 33 cases during the month of November and it is quite possible that this decrease may continue still further; but taking November as a basis the proposed officer would earn £69 inclusive of 1*s.* per case for notification and visit per annum, an amount which we consider entirely inadequate for a professional man devoting his whole time to the duties of the office and so sacrificing the principal portion of his professional life.

At our meeting it was resolved that no such proposed appointment could be satisfactory unless the guardians were prepared to guarantee a minimum salary and that salary should be at least £350 per annum. A deputation from us was also appointed and has waited upon a number of the guardians and pointed out the above facts, but not mentioning our proposed minimum of £350 per annum, without any satisfactory result, although the guardians present were individually of opinion that the proposed officer should have a living wage but they would not fix what amount that should be. At our adjourned meeting it was resolved that this statement be drawn up and sent to all the local members of the profession so that they be advised not to apply for the proposed office until the guardians have amended their proposed terms of appointment by including a guaranteed minimum salary.

We are, Sirs, yours faithfully,

JAMES CORNS, Chairman.

Oldham, Dec. 14th, 1907. FRANK RADCLIFFE, Hon. Sec.

## THE LATE DR. A. MACTIER PIRRIE.

*To the Editors of* THE LANCET.

SIRS,—In your appreciative obituary notice of the late Dr. A. Mactier Pirrie, whose untimely death is greatly to be deplored, I see you state that he travelled through the Bahr-el-Ghazal Province of the Soudan. This is not the case. Dr. Pirrie was never farther south than Barboi wood station which is near the mouth of Zeraf river, a short distance south of Taufikia on the White Nile. His work was done on the banks of the latter, at the American Mission on the Sobat, and amongst the Burun people who occupy a little-known district between the White Nile and the Abyssinian frontier. I think it very likely that Dr. Pirrie acquired the infection which unhappily proved fatal to him in the Sennar province. He entered this district after a somewhat remarkable journey through Burun territory and it is here that cases of kala-azar have been occurring quite recently. With the exception of a single case discovered by Dr. Neave in 1903 this disease has not hitherto come under notice in the Soudan, and, so far as is definitely known, Dr. Pirrie is the first European to fall a victim to it. The work of Captain Cummins, and latterly of Captain Bousfield, both of the Egyptian Medical Service, has shown, however, that it occurs with some frequency in certain districts, and I have recently met with the parasite in splenic smears sent from two cases terminating fatally at Wad Medani on the Blue Nile.

Dr. Pirrie was an enthusiastic observer, and for so young a man proved himself a remarkably good explorer, while his handling of the shy and wild native tribes amongst whom he penetrated seems to have been characterised by much skill and tact. It may be interesting if I record a single incident of his expedition which occurred at Renk on the White Nile. The British inspector shot a duck which fell into a backwater of the Nile, known to be haunted by at least one very large and man-eating crocodile. A small native boy plunged into the water and swam out to retrieve the bird. He was noticed to be in difficulties and without a moment's hesitation Dr. Pirrie ran out of his tent bareheaded, entered the river and made a gallant though futile attempt to rescue the boy who had been seized with cramp. This brave act very nearly resulted in Dr. Pirrie acquiring sunstroke, for the affair happened during the hot part of the day. The story was told me by another British inspector and the incident was never mentioned by Dr. Pirrie. It will illustrate the type of man whose services we have lost and whose name must be added to the long list of those whom science can claim as martyrs.

I am, Sirs, yours faithfully,

ANDREW BALFOUR, M.D. Edin.,
Director, Wellcome Research Laboratories.

Gordon College, Khartoum, Dec. 3rd, 1907.

## THE NEEDS OF LONDON MEDICAL STUDENTS.

*To the Editors of* THE LANCET.

SIRS,—Your editorial article under this heading in last week's issue of your paper seems to me to be open to the charge of disingenuousness—to use the mildest term which occurs to me—in that part of it particularly which refers to concentration. You appear to base your view that the London medical student is handicapped in his struggle for a degree on the argument that because there is a multiplicity of medical schools his studies are "disorderly." You go on to state that "this was recognised four years ago by all the London medical schools" and "the principle of coöperation for the preliminary medical studies adopted by the medical faculty." You speak of the "scheme of amalgamation" and the "concentration scheme" as if this had remained a constant quantity in all these four years, and you blame the Senate by implication for its resolution that the "scheme had proved abortive." Finally, and very surprisingly, you find in the fact that Professor Starling was elected, by a majority of 11 in a poll of 239, the day after that resolution was made known, and consequently when the question had become a *chose jugée* and thereby no longer before the Faculty at all, ground for the statement, which ends your article, that "the Faculty shows by its votes that its members are in no way opposed to the concentration of the preliminary medical studies."

I think it would be easy to controvert every one of these statements. I shall, however, confine my remarks to your criticism of the action of the Senate in this matter. It certainly could not be gathered from your narrative that the scheme of concentration at the date of the recent election

differed very materially from the scheme of "four years ago"; how materially your readers may judge when they are informed that the scheme had been progressively whittled down from a project for universal concentration in one centre with buildings and endowment to cost £375 000, and a contemplated yearly entry of 350 students, to the suggestion that the University should provide accommodation with the £70,000 subscribed for the students of two schools whose combined yearly entry of internal students averages 28. Sir Arthur Rücker, in your issue of Nov. 30th, forcibly points out that "it cannot be honestly said that on this capital it is possible to establish an institute such as that for which the subscriptions were given. It would have been a real breach of faith with the subscribers to attempt it." The history of the transition—which you wholly ignore—is as follows and to my mind completely justifies the action of the Senate.

Two years ago, under the active guidance of the dean of the Faculty of Medicine, and with no symptoms of dissent from the Faculty which he controls so admirably, the scheme was modified to include the foundation by the University of three centres for preliminary medical education, of which one, estimated "to accommodate with comfort a yearly entry of 100 medical students," has already been fully started and a second is on the eve of starting with equal accommodation. The Senate having thus provided for nearly two-thirds of the number of students originally contemplated was faced with the certainty that only about three-tenths of this number of students would come under concentration-centres. It was further demonstrated that simultaneously with the change of plan and the withdrawal of the larger schools subscriptions to the fund had entirely ceased. The provision under these conditions of yet another centre was clearly ridiculous; its necessity had throughout been contingent upon the demand exceeding the accommodation already provided at the two centres incorporated in the University (*vide* "appeal" of 1905). You yourself use the argument that an unnecessary multiplication of schools promotes "disorderliness of studies" and yet the University is blamed by you for not creating at great expense a new school to compete with its own depleted centres and with at least six other constituent schools which have refused concentration.

You omit also to mention in explanation of the action of the Senate that the decision to which they have come was conditioned by the terms on which the site had been offered. These were that an adequate sum of money, estimated at £130,000, should be subscribed to the fund before Dec. 31st, 1907, when the option of the site was to lapse. A large body of members of the Senate and of the Faculty of Medicine hoped that there might be saved from the inevitable wreck of the whole scheme that part of it which contemplated helping research. It was felt by this section that, to use the words of the statute which had been the germ of the whole movement, "common courses of instruction in the preliminary and intermediate studies" had been provided by the University far in excess of the demand for such teaching at its two centres; and that the "third centre" which was no longer required for this purpose might very well be devoted to research work, provision for which had been prominently demanded in the original appeal, in response to which all the money in hand had been subscribed. The saving of this part of the scheme had been rendered impossible by the action of the party which you support, and I hope that they and you are proud of the result.

I am, Sirs, yours faithfully,

London, W., Dec. 18th, 1907. E. GRAHAM LITTLE.

*** The facts are well known. We support no party; we are concerned with obtaining for the London student a medical degree at his University. We disagree with many of Dr. Graham Little's conclusions, but do not, therefore, call him disingenuous. He is, however, mild compared with one gentleman who has addressed us upon the subject of our untruthfulness, gross partisanship, and power of making mischief. Of course there are members of the Faculty who are opposed to the concentration scheme. In the very article where we are supposed to have concealed this obvious fact we allude to it over and over again, and seriously how could any sane person deny it? It is clear that our closing words mean that the Faculty as a whole has in no way declared against concentration in such a way that the question must be considered permanently closed.—ED. L.

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*To the Editors of* THE LANCET.

SIRS,—When is this futile anomaly of medical titles to be abolished? Is anything to come of discussion this time? It is, "Send for the 'Doctor.'" "Good morning, 'Doctor.'" "Oh, yes, 'Mr.' Jones is my 'Doctor.'" Surely the stupidity of the convention needs no comment. There is at least one town, supporting several practising "physicians and surgeons," where the only individual who has the undeniable right to call himself "doctor" on his visiting cards is a retired American dentist. Everyone knows the perplexity of the intelligent foreigner over the absurd distinctions of address in our profession in this country. There is one partial remedy which should meet with little opposition. The University of London might be clear-sighted enough to institute a degree for Conjoint men of mature age much on the lines of that of St. Andrews. A man of 40 years is unlikely to improve much by the additional letters save his *amour propre*, but that means a deal to many, and many would go to the trouble and expense of trying for it where the provincial degree would seem hardly so desirable.

The crux of the whole matter, of course, is that the "haves" are the powers that be and they do not see why they should level up the "have-nots," though they freely admit the ethical justice of the demand, and may I add that those very "haves" are always most scrupulous in addressing the said Mr. Jones as "Doctor Jones" when they are called into consultation with him?

I am, Sirs, yours faithfully,

Dec. 11th, 1907. A "HAVE-NOT."

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*To the Editors of* THE LANCET.

SIRS,—I was glad to see you devote a leading article to the needs of London medical students, but somewhat disappointed that you did not say more upon the subject. You say, "No suggestion has been put forward to meet the admitted disabilities ..... &c.," but really do not offer any yourself. The question, to my mind, has two aspects quite distinct from each other—viz.: (1) the prefix of "Doctor" and (2) the suffix of "M.D." Every registered medical practitioner is known to the public as a doctor and is given this designation as the proper means of describing him. In ordinary common law "custom," if often enough repeated, has the force of law, and so every medical practitioner has the legal right to the title of "doctor"; as a matter of fact, the law cannot prevent anyone who pleases from using this title. This right appears to have been lost sight of. The medical man should therefore help himself; he should put the prefix "Dr." upon his door-plate (as the M.B. already does); he should address all other practitioners as "Dr." The societies, the medical journals, &c., should always give him this title, as is done in the colonies and elsewhere than in England.

As regards the degree of M.D., it may be noted that London, with its population of nearly 7,000,000, has only one *degree*-granting corporation, whereas Liverpool, Manchester, Leeds, Birmingham, Edinburgh, Glasgow, Aberdeen, Dublin, Oxford, Cambridge, and Durham, with a combined population of 3,500,000, have 12 degree-granting bodies—an unfair proportion. If London had universities in the same proportion she would have 24 universities granting the degree of M.D. instead of only one as at present.

As a solution of the M.D. aspect of the question, without in any way interfering with the London University medical degree, I would suggest the following. The Archbishop of Canterbury still retains his power of granting an M.D. degree (M.D. Lambeth) to persons who are already legally qualified practitioners. Now why cannot the Medical Council induce him to confer this degree upon every registered medical practitioner who applies for it? The fee charged would produce a large income which might be devoted to charitable purposes, after defraying expenses, if he saw fit. A somewhat similar procedure exists with regard to a Member of Parliament—he cannot *resign* his seat, so he "accepts the Chiltern Hundreds."

I am, Sirs, your faithfully,

Dec. 16th, 1907. SYMPATHISER.

## THE POWER OF LOCAL AUTHORITIES TO PROVIDE HOSPITALS.

*To the Editors of* THE LANCET.

SIRS,—The fact that local education authorities have, with due permission, the power to establish hospitals for school children is of great importance and many will have read your observations with interest. There are now one or two further questions which arise: 1. Have the education authorities power compulsorily to acquire sites for their hospitals? 2. Must the authorities employ in the hospitals qualified medical practitioners or can they intrust the treatment to nurses acting under the supervision of the medical officer of health for the county? 3. Must the treatment be free; if not, can the authority employ inquiry officers to ascertain which parents can, and which cannot, afford to pay the whole or part of the cost? 4. Can the authority admit to, or exclude from, the hospitals the children of ratepayers who do not send their children to the elementary schools? 5. Can the authorities supply free of charge spectacles and surgical appliances? 6. Can the authority decide that a child requires spectacles and that his father can afford to pay for them, and if the child comes to school without spectacles, refuse him admission and then prosecute the father for not sending the child to school? I am, Sirs, yours faithfully,

J. S.

*** We make no attempt to answer our correspondent's interesting category of questions in the form of an editorial footnote. He has raised points which require consideration. —ED. L.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

*Medical Students' Annual Dinner: Presentation to Professor Rushton Parker.*

THE Liverpool medical students' annual dinner, which took place at the Adelphi Hotel on Saturday evening, Dec. 14th, with Professor Rushton Parker as chairman, was made the opportunity for presenting Professor Parker with his portrait in oils—the work of Mr. George Hall Neale—subscribed for by past and present students of the Liverpool Medical School and other friends. The occasion signalised is the recent retirement of Professor Rushton Parker from the post of honorary surgeon to the Royal Infirmary. Simultaneously with the medical students' dinner, at which a large number of the medical profession was present, a gathering of ladies dined together at the same hotel in honour of Mrs. Rushton Parker. The presentation ceremony was arranged for 6.30 P.M. to enable the Lord Mayor (Dr. Richard Caton) to perform the function of unveiling the portrait as he had another engagement to dine elsewhere. The Lord Mayor said that he felt great pleasure in presenting to his old friend and colleague Professor Rushton Parker a tribute of the affection in which he had always been held by his students ever since the earliest days of the University College, when he (the Lord Mayor) and Professor Parker had both been engaged in teaching there. He expressed regret at the retirement of Professor Parker from the active work of the Royal Infirmary. The Lord Mayor then unveiled the portrait, which is a speaking likeness and is one of Mr. Hall Neale's happiest and best works. Professor Parker, who was greeted with great heartiness, said that he was much touched at the kind thought which had prompted his students and friends to do him honour in such a gratifying way. He expressed great delight at the portrait. He thanked his senior colleague, Dr. Caton, for his very kind words and he also wished to thank the large number of ladies for coming to do honour to his wife.

*The City Council and Grants to Hospitals.*

The city council at its last meeting agreed to a resolution, subject to the approval of Parliament, to contribute a sum not exceeding £5000 towards the rebuilding of the Children's Infirmary, such sum to be paid so soon as the balance necessary to complete the rebuilding of the infirmary has been raised by the trustees thereof. A similar clause, providing for the contribution of £4000 to the funds of the David Lewis Northern Hospital towards the erection of an out-patient department, when the balance of the amount necessary to complete the building to the satisfaction of the corporation shall have been raised, was also passed. Other Liverpool hospitals are also seeking corporate help.

*Sir Alfred H. Keogh, K.C.B., and the Medical Service for the Territorial Force.*

The Director-General of the Army Medical Service (Sir Alfred Keogh) addressed a well-attended and representative gathering of Liverpool medical men at the town hall on Dec. 10th. He placed before them an outline of the scheme by which it is proposed to organise a comprehensive volunteer medical and sanitary staff in connexion with the new Territorial Force. The Lord Mayor (Dr. Richard Caton) presided. The scheme, Sir Alfred Keogh said, was one which had been really devised by the Volunteer medical officers themselves. So long ago as 1901 a meeting of Volunteer medical officers held at Edinburgh put forward practically every one of the proposals embodied in the official scheme and more recently at another meeting of Volunteer medical officers practically the same suggestions had been made. When he took up the position of Director-General of the Army Medical Service his attention had been first occupied with the organisation of the Volunteers, because, as was well known to every student of military medical organisation, the existing state of affairs was far from satisfactory. There was now a declared military policy of a definitely scientific character, under which there would be an expeditionary force equipped to take the field abroad at a moment's notice; and in the absence of that expeditionary force the whole responsibility of home defence would be undertaken by the citizen or territorial army. The absence of the expeditionary force implied the removal of the regular medical service of the army, which was not, as a matter of fact, sufficiently large for the purposes of completely satisfying the needs of the expeditionary force, but was large enough to form a sufficiently good nucleus. The whole responsibility for the medical arrangements of the citizen army, if there were an invasion during the absence of the regular army, would devolve upon the medical profession. The leaders of military thought were thoroughly awake to the immense importance of the relation which the medical service bore to the army. There was a time when this was not so but military science was now being studied and it was now clearly realised that the battles of the future were not going to be won simply at the point of the bayonet but by the different sciences composing the army. The duty of the medical service might be summed up in the phrase—the maintenance of the fighting strength of the army. The British army being a comparatively small one made the prevention of wastage of fighting force in the field a factor of enormous value in the winning of battles. Military experts calculated that the wastage of strength in our army in the first year of a war was 80 per cent. of the total strength. A large part of this was to be attributed to medical shortcomings, lack of knowledge as to the origin and spread of disease in camps, and insufficient inspection of the men in hospital, many of whom were not sent back to fight when they were fit to take their place in the line. Large numbers of men were returned home from South Africa in the late war who ought to have been in the ranks. Our system of disease prevention and sanitation was defective in one respect—that the officers who were charged with the care of the hospitals were also charged with the sanitation of the surrounding area. That was utterly impossible, and for the correction of this defect they had the beginning of a sanitary service in connexion with which there was a sanitary school at Aldershot. Another proposal was that a sanitary committee of business men should follow the troops in time of war and assist the medical staff on the spot instead of holding a commission of inquiry after the battle. Dealing with the existing medical service of the volunteers Sir Alfred Keogh remarked that in many battalions there were four or five medical officers and no hospitals whatever. They had trained a number of men to pick up the wounded and to carry them. What they were going to do with them after picking them up and where they were to carry them nobody could say. Civil hospitals would not do for the accommodation of the citizen army. If a small army of 70,000 were sent to Liverpool and had to be kept under canvas it would only be a matter of a few days before there were 2000 or 3000 on the sick list. That condition would grow in intensity until, quite apart from epidemics, there would be 10 per cent. of the men in hospital. There was no sanitary service whatever connected

with the volunteer forces and the conditions of the volunteer army had been admirably adapted to the exclusion of a large number of the leaders of the profession in medicine, surgery, and sanitation. In explanation of the scheme Sir Alfred Keogh said that there were to be 11 specific areas recognised, and every division would have a medical officer on the staff of the general, from whom he would receive his orders and convey them to the staff in his area, thus securing coördination in the medical and military movements. With a chief medical officer of each division there should be a sanitary officer, with each battalion there should be a sanitary organisation. Every sanitary officer in the country should be asked to join that force. He proposed also that there should be 23 general hospitals at the great educational centres, so that the aid of the most eminent experts in the profession could be obtained; three field ambulances, consisting of nine medical officers and a quartermaster and 230 non-commissioned officers and men, would also be required in each division. The organisation of the field ambulance would imply work in time of peace, but Liverpool had great facilities in connexion with its special schools, hospitals, and educational institutions. Those who could not go into camp would be asked to do eight days' training of some kind. The days would not necessarily be consecutive and three hours would compose each day. A consolidated corps to embrace all this was proposed for the purpose of carrying out the duties which would devolve on the medical profession in time of invasion. A motion in hearty support of the scheme was proposed by Surgeon-Lieutenant-Colonel Damer Harrisson, and seconded by Dr. E. W. Hope, the medical officer of health, who said that, so far as the corporation of Liverpool was concerned, the employment of the sanitary officers in the scheme had their hearty support. Sir Rubert Boyce also said that the scheme would have the sympathy of all his colleagues at the University of Liverpool.

Dec. 17th.

## WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

*Cardiff Infirmary.*

A FEW years ago a very complete installation of electrical apparatus was placed in the Cardiff Infirmary and has proved to be of considerable service. As the result of experience it has been found desirable to place this department under the charge of one person and it has been decided to appoint a special medical officer for this purpose at an annual salary of £150. It will be his duty to attend at the infirmary at least once on every week-day and at other times if necessary. In making the appointment the board of management stipulates that the person elected shall not in his private practice hold any Poor-law or club appointment or be engaged in pharmacy.

*The Notification of Births Act.*

When the Cardiff health committee recently considered the question of adopting the Notification of Births Act the chairman of the committee (Mr. J. Robinson, L.R.C.P. Irel.), while approving of the Act as safeguarding the community against abuses which arose under the ordinary Registration Acts, said that he considered it was unreasonable to expect medical men to undertake work without any remuneration. Dr. E. Walford, the medical officer of health, said that of the 5000 births which occurred in the city annually about 60 per cent. were attended by midwives. After a suggestion had been made that the medical practitioners in the town should be asked to carry out the provisions of the Act until it had been amended in a form to provide for the payment of their fees, it was ultimately decided to ask the medical officer of health and the town clerk to report in detail upon the subject and to consider it at a special meeting of the committee. A resolution has been passed by the Cardiff division of the British Medical Association condemning the provisions of the Act which apply to medical men.

*The Teeth of Workhouse Children.*

It is to be regretted that the Gloucester board of guardians has not had the courage to adopt the recommendation of a committee of the board that a dentist should be appointed to look after the teeth of the children who are under the care of the board.

*The Water-Supply of the Rhondda Valleys.*

More than one-half of the population of the Rhondda Valleys, or about 70,000 persons, are supplied with water from the Pontypridd waterworks company which has reservoirs holding about 220,000,000 gallons at the extreme end of the lesser valley. For a period extending over more than ten years this supply has been very unsatisfactory not only with regard to its amount but also because of its unsightly appearance. The gathering grounds are a peaty moorland and it has been found very difficult to remove the consequent discolouration from the water. In more recent years the water has assumed a plumbo-solvent quality and quite a number of cases of lead-poisoning have been reported within the area of supply. The present medical officer of health as well as his predecessor repeatedly urged upon the urban district council the desirability of compelling the waterworks company to carry out the statutory obligations imposed upon it. These included not only the supply of a "pure and wholesome water," but that the water before entering the mains should be "efficiently filtered." The appearance of the water was sufficient evidence that the filtration was not "efficient" and the inhabitants refused to drink it, resorting to mountain streams and springs for their supplies. These sources were obviously open to pollution and in one instance among a group of 100 houses the occupants of which drank the water from a neighbouring stream there were 46 houses in which cases of typhoid fever occurred. In this outbreak 68 persons were attacked and ten died. The district council has at last sought the assistance of the Courts and an action was commenced in the Chancery Division before Mr. Justice Warrington. A mass of evidence was brought forward not only by consumers in the district but by officials of the district council and others, and after the trial had proceeded for eight days the waterworks company agreed to do all that was required of it and to contribute £2000 towards the costs of the council.

*The Devon County Council and Pulmonary Tuberculosis.*

At a meeting of the Devon county council held on Dec. 12th the general purposes committee reported that it had given further consideration to the question of forming the whole county into a joint hospital district for the treatment of persons suffering from pulmonary tuberculosis and that it had prepared a draft order for the creation of such a district and for the constitution of a hospital committee. The committee thought it desirable, however, before presenting any definite report to ascertain the views of the district councils upon the subject. After some discussion it was decided to adopt the recommendation of the committee.

Dec. 16th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

*Cremation in Glasgow.*

THERE is no doubt that cremation as against burial is slowly gaining ground in the West of Scotland. The past two years have been the most successful in the history of the Scottish Burial Reform and Cremation Society which owns the crematorium in the Western Necropolis, Glasgow. An average of 42 cremations have been carried out each year, as compared with 26 for the year ending September, 1905. It is interesting to note in connexion with the spread of this movement that there are 12 crematoriums now in operation in England—viz., Manchester, Woking, Liverpool, Darlington, London (Golder's Green), City of London, Sheffield, Bradford, Birmingham, Leeds, Hull, and Leicester. The three last mentioned are municipal institutions.

*The Treatment of Inebriates in Scotland.*

The report of the inspector for Scotland under the Inebriates Acts for 1906 has just been published. At the commencement of the year there were six institutions certified for the care and treatment of inebriates; during the year two retreats for drunkards have been licensed and one reformatory certified, and thus at the end of the year there were under inspection nine institutions for the treatment of inebriates. Of these three are retreats, five certified inebriate reformatories, and one a State inebriate reformatory. The total accommodation provided by these nine

institutions amounts to 214 beds, of which 66 are in retreats, 116 in certified inebriate reformatories, and 32 in the State reformatory. The total number of persons dealt with under the Acts during the year was 255, of whom 106 were patients in retreats and 149 reformatory inmates. The total is larger than in any previous year and is 40 more than dealt with in the preceding year, 1905. It is interesting to note that in one certified reformatory (Girgenti) a specific drug treatment was tried and found to be a complete failure. The experience gained by the trial of that treatment was of value, because the results were sufficiently definite to be conclusive. The drugs used were atropine, quinine, aloin, and salts of ammonium and sodium, a mixture much vaunted for the cure of inebriety. The managers of the reformatory, desiring to try the effects of such treatment, asked for inmates willing to submit to it, and twenty-two volunteered and underwent a full course. The result in every case was failure, for every one of the women so treated has since discharge relapsed into drunken habits. Girgenti has been successful in reforming some inebriates but of those subjected to the drug cure none have been reformed.

*Death of the Oldest Parochial Medical Officer in Scotland.*

Last week Mr. Robert Girvan, the oldest parochial medical practitioner in Scotland, died at his residence in Maybole. He was 75 years of age and practised for 54 years in Maybole. Three years ago he attained his jubilee as medical officer for the late parochial board and present parish council. He took a great interest in the volunteer movement and a few years ago retired with the rank of surgeon-lieutenant-colonel (V.D.).

*Aberdeen Medico-Chirurgical Society: Annual Dinner.*

The annual dinner of the above society was held on Dec. 13th. The company numbered about 50, including several guests. Dr. George Williamson, the President, occupied the chair, and Dr. David Rennet, Vice-President, acted as croupier. After dinner the chairman gave the loyal toasts. Dr. G. M. Duncan proposed "The Imperial Forces" and Major J. Scott Riddell, M.V.O., replied. Professor W. Stephenson submitted "The Founders of the Society" and, as usual, the toast was pledged in solemn silence. Dr. W. E. Lawson proposed "The University and Medical School" and the Principal having responded "The Medico-Chirurgical Society" was proposed by Dr. J. O. Wilson, and the President replied. "Sister Universities and Medical Schools" was received from Dr. John Gordon, and Sir Hector C. Cameron and Mr. Miles responded. The health of the President was cordially pledged on the call of Dr. Angus Fraser, and Dr. Williamson replied. Dr. Rennet proposed "The Guests" and Professor J. G. McKendrick responded. During the evening songs were given by several of the members and a pleasant time was spent.

*Sanatorium for Inverness shire.*

There has just been opened at Aberchalder the sanatorium for the county of Inverness. Its chief promoter has been the Hon. Margaret Fraser of Lovat who has acted as honorary secretary. Eight patients have already been admitted. They are being visited twice a week by Dr. D. S. Johnston, Fort Augustus. A committee of management will be appointed at an early date and will have the advice and assistance of Dr. John Macdonald, medical officer of Inverness-shire, and Dr. A. C. Miller, district medical officer at Fort William. The usual stay of patients will be from three to four months. The buildings are capable of accommodating 22 patients, of whom eight or ten may be non-paying. The sanatorium is situated about two miles from Aberchalder station and overlooks the Caledonian Canal near Cullochy Lochs. The site is about 400 feet above sea level, and has a southerly exposure. The buildings are well sheltered from the north and east winds by a wooded hill immediately behind. The sanatorium is composed of two separate buildings—the administrative block and the wards for the patients. The administrative block extends to 80 feet in length and comprises the medical officer's room, the matron's and nurses' rooms, kitchen and kitchen departments, stores, and servants' rooms. The wards, which are capable of accommodating in all 22 patients, are erected on a terrace immediately in front of, and below, the administrative block. This building extends to 170 feet in length and contains six double rooms, four single rooms, two nurses' rooms, a large day room, and in the wing annexed bathrooms, lavatories, &c. The plan of the sanatorium is similar to that of the Keeling sanatorium in Norfolk.

Dec. 17th.

## IRELAND.

(FROM OUR OWN CORRESPONDENT.)

*The Tuberculosis Exhibition.*

AT the final meeting on Dec. 11th of the committee which took charge of the Tuberculosis Exhibition in Belfast a letter from Her Excellency the Countess of Aberdeen was read, expressing her congratulations and conveying her thanks to the committee, secretaries, and organisers of sections for the way in which the exhibition had been managed. A very satisfactory report was presented by Dr. T. Houston and Dr. J. E. MacIlwaine, the honorary secretaries, and by the treasurer, Sir Otto Jaffe, LL.D., showing that 90 per cent. of the guarantee fund would be sufficient to meet the expenses of the exhibition. Cordial votes of thanks were then passed to the Lord Mayor and to the Countess of Shaftesbury (president of the exhibition); to the corporation of Belfast which lent the old town hall in which the exhibition was held; to the lecturers; and to the honorary secretaries whose constant and unceasing efforts contributed so much to the success of the exhibition. The exhibition has been extremely successful. In acknowledgment of the compliment the Countess of Shaftesbury expressed the great indebtedness of all concerned to Sir John W. Byers for his unwearying labours in connexion with that memorable movement.

*Treatment of Infectious Disease in Belfast.*

The Belfast board of guardians decided at its meeting on Dec. 10th that in future all cases of infectious diseases should be removed to the Purdysburn fever hospital instead of being admitted to the workhouse infirmary.

*Health of Belfast.*

From the report of the medical superintendent officer of health of Belfast, presented to the public health committee on Dec. 12th, it appears that the death-rate is unusually high, 26·9 per 1000 and 3·1 from the principal zymotic diseases. As an explanation of this exceptionally high mortality it is said that the deaths of people over 60 years of age and those from measles are the cause. The inspector of dairy farms gave a deplorable account of his examination of dairy farms outside the city boundary in county Down, and in the majority of cases the conditions were as follows:—

> The cows seemed to be never groomed, manure being encrusted on their quarters, flanks, and udders, and some of the cowsheds have never been limewashed. The walls of some have rough surfaces covered with dust and the ceilings covered with cobwebs, while the floors are full of ruts and holes. During the milking the milk is kept in cans inside the byres, where dust is floating about, and in each case where I have inspected at early milking time the persons milking seem to have little regard for personal cleanliness.

Dec. 17th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

*Laicising of the Hospitals.*

IT is well known that during the last few years most of the nursing by nuns in the Paris hospitals has been suppressed and for some little time there have been only two hospitals—namely, the Hôtel Dieu and the St. Louis Hospital—where the nursing has been carried on by nuns. Now the Minister of Education, Fine Arts, and Public Worship (*Cultes*) has just sent in a report upon which the President of the Republic has issued an order declaring the nursing establishments founded in these two hospitals by the nursing congregation, founded in Paris in 1810, to be closed.

*Sterilisation by Means of the X Rays.*

M. Foveau of Courmelles, who has been making researches into the action of the x rays as causing the retrogression of fibromata, read a paper before the Academy of Sciences on Nov. 25th. In this paper he gave details of 53 cases in which the action of the x rays had brought about sterilisation. The number of sittings found necessary varied from 18 to 160. It was found that to be of use the rays had to be applied perpendicularly to the ovarian region and it was therefore evident that sterilisation for criminal purposes without the knowledge of the patient (*par surprise*) was impossible. The ages of the women varied, the youngest being 31 years, and the women up to 40 years of age reacted more slowly to the rays than those above 40. All the women with the exception

of one, aged 46 years, underwent a premature menopause. In none was there any family history of an early menopause.

*A "Balloon Cure" for Tuberculosis.*

M. Christian Beck read a paper before the Academy of Sciences on Nov. 25th in which he stated a case for aerostatic exercises in the treatment of tuberculosis. He is of opinion that by this aerial departure in therapeutics the altitude treatment can be carried out in a unique manner away from all crowds, a condition impossible of attainment on terrestrial mountain resorts; neither vegetable nor mineral particles are present in the air which is also bacteriologically pure. The "altitude dose" can be adapted to individual needs and the patient can be lifted up above the fogs which often darken the skies of Switzerland in the summer mountain resorts. The constant changing of the air which is experienced in "aerotherapy" will, he considers, have a favourable effect on tuberculosis. The treatment should be carried out daily.

*Congress of Climato-therapy and Urban Hygiene.*

This Congress will be held at Biarritz from April 20th to April 25th, 1908, under the presidency of Professor Pitres, dean of the Faculty of Medicine of Bordeaux. Among the subjects put down for discussion are the following: The Indications for and against Ocean Climates in Neurasthenic Conditions; the Combined Action of a Marine Climate and of Sodium Chloride Medication in Glandular Tuberculosis and in Rickets; Municipal Health Departments and Sanitary Regulations at Health Resorts; and the Climatology of the Gulf of Gascony. The organising committee of the Congress has its headquarters at Biarritz.

*Avulsion of the Whole Upper Limb and Scapula.*

At a meeting of the Academy of Medicine held on Dec. 3rd M. Berger read an account of this case for Dr. André of Péronne. The patient was a young man, aged 17 years, who had his left hand caught up by a driving-belt and the arm twisted round a shaft revolving 60 times a minute. The whole limb, together with the scapula, was torn off from the trunk, the clavicle remaining in place. There were very little hæmorrhage and no very marked shock. M. André cut off the portion of the clavicle which stuck out of the wound, tied the subclavian artery, trimmed up the torn muscles, and stitched up the cutaneous wound. The patient recovered perfectly in 15 days. M. Berger said that he only knew of one other case of such extensive avulsion which had taken place and that was the one mentioned by Cheselden in his Treatise on Anatomy, in which recovery took place in the same way.

*The Treatment of Coxalgia.*

At a meeting of the Academy of Medicine held on Dec. 5th Dr. Calot of Berck read a paper on Coxalgia, for which complaint he had introduced a method of treatment which had given admirable results without any lameness. No one has hitherto hoped for such good results. It is well known that the destruction of the joint surfaces and the accompanying ankylosis which is the cause of the lameness begin to be produced even so late as four years after the tuberculous infection. If the surgeon, then, can make a fairly early diagnosis he has plenty of time to intervene for the prevention of the distressing complication of lameness, not by the ordinary method of continuous extension but by direct treatment of the articular surfaces. Dr. Calot's method consists in injecting directly into the joint, from points which have been very carefully laid down (*points soigneusement repérés*), certain fluids, first of all naphthol camphor and later iodoform dissolved in ether. The joint is at the same time immobilised in a plaster splint. By this method the duration of the painful affection of the hip-joint is much reduced and the patient recovers without any shortening or lameness.

Dec. 17th.

## ITALY.

(FROM OUR OWN CORRESPONDENT.)

*State Medicine.*

LOOKING back on the year now closing I have to note few accessions made in Italy to medical theory or practice and not many in the department of research work in the laboratory. It is in State medicine and in prophylaxis rather than in remedy or "cure" that progress has to be registered. This is the direction in which, for the present, the activity of the profession in Italy can be most usefully turned, claiming as it does a kind and a degree of attention paramount in a young kingdom struggling, after centuries of division and oppression, to "the ampler ether, the diviner air" of rehabilitation, moral and material, on constitutional lines.

*Physical Deterioration: Its Chief Causes.*

In a powerful, pathetic appeal addressed by the distinguished statesman and historian, Pasquale Villari, to an audience lately convened to do him honour on his reaching his eightieth birthday, the orator dwelt on the alarming decline of corporeal development in the Italian proletariat, particularly in the southern provinces. This was shown (among other indications) in the increasing number of rejections at each successive conscription for military service—only about 60 youths of 20 years of age being fit for the duties out of every 100. But what can we expect, asked Signor Villari, when year by year emigration is depleting the country of its best blood? In 1906 no fewer than 800,000 Italians, the majority of them young, active, enterprising men, abandoned their native homes to keep soul and body together in other climes, in the United States of America especially. In New York alone, the last census gave 400,000 as the number of Italian residents and even there the conditions under which they live and work are sufficiently deplorable. Reinforcing the humblest ranks of labour mostly as navvies, often enough as itinerant hawkers, or even shoeblacks, they are employed in service in which no American and, now, very few Irish will engage, while they herd together in domiciles in which nearly every condition of health is lacking. And yet, bad as this life is, it is considered by the Calabrian or the Sicilian to be a change for the better, and he leaves his native land for the United States in the numbers above indicated by way of "a rise in life"! When he does return, as many have done lately, he is in a deteriorated state of health—only less deteriorated than that of the old or the infirm or the weakly whom he had left behind to beget their like. The results of this state of matters are shown in the conscription returns already quoted and in the ravages of tuberculosis in the country towns of Southern Italy where not many years ago the disease was quite unknown! Other maladies previously non-existent in the same region now find "candidates" among the stay-at-home population, as also among the returned emigrants, till the said diseases become endemic—the result of an *ensemble* of conditions auguring a speedy "decline," if not an ultimate "fall," in the manhood of Italy. Signor Villari, of whose impressive discourse I have merely given an outline, concluded by appealing to all that was enlightened, patriotic, and humane in his distinguished auditory to combine in an organised endeavour to keep the agricultural population on the land by improving the conditions in which it lives and works and by reinforcing in every way the efforts of the public health department towards the same end. As an incentive to the younger among his hearers to enter on this veritable crusade with intelligence as well as vigour he publicly announced that the 12,000 francs subscribed as a birthday gift to himself would be dedicated by him to a competition, the subject of which should be "A Study of the Social Condition of Southern Italy, with Suggestions for its Amelioration." The generous proposal has already been responded to so far as to place many of the ablest and most accomplished of young Italian university men on the list of competitors and the prize-winner will have the additional satisfaction of having, *pro virili parte*, coöperated with the best of his compatriots, official and other, towards the solution of a problem first in importance for his country's well-being, present and future.

*The Lost Ones of Society.*

"*Tra la Perduta Gente.*" Under this title Signor Giovanni Rosadi, the eminent pleader in criminal cases at the Tuscan Bar, draws attention to another field for the consideration of State medicine—crime as the outcome of mental disease. We have here an example of a distinguished jurist looking in no spirit of antagonism to the specialist in psychiatry but recognising the soundness of his scientific standpoint and inviting his coöperation towards a common end, the prevention of crime. This is a momentous change of attitude between the two professions—the legal and the medical. That there are what Carlyle called "diseased developments" in the moral world has, "at long last," been so far admitted by the law in Italy as to affect judicial decisions and verdicts of

jurymen—the physical condition of the so-called "criminal" entering into the category of "attenuanti"—that already wide and still elastic loophole of escape for "the prisoner at the bar." The fact, indeed, is a practical acknowledgment of what criminal anthropology has already put in evidence; and Signor Rosadi, in the profoundly interesting volume the title of which I have given, supplies from his unrivalled experience a number of illustrations of what Lombroso and his school used alternately to be ridiculed and denounced for asserting. "Inhibitory paresis"—formerly the *bête noire* of the juridical doctrinaire—he fully recognises as a pathological condition susceptible of proof. At a celebrated trial in Edinburgh some 40 years ago the then professor of practice of physic in the University, Dr. Thomas Laycock, when called as a witness for the accused—the charge being that of murder—affirmed that with full consciousness of his criminal act and its consequences, a man might yet be without power of self-control and so commit the crime. Here the judge—the late Lord President John Inglis—interposed: "Gentlemen of the jury, were the Colleges of Physicians of England, Scotland, and Ireland to assert that doctrine on their combined authority I would feel it my duty to warn you of its fallacy." Such was then the opinion of Italian jurists also. It is not so now; and Signor Rosadi's book is written to show that crime may be coincident with morbid deviations from physical health in its most refined sense; that these deviations are both inherited and acquired; and that they may to a great extent be guarded against by a State-controlled inspection of infancy carried out by medical men, particularly on the entrance into school life, where by example and moral contagion the morbid mental condition is often acquired. Dr. Le Grand du Soul of Paris was a pioneer in this field of psychiatry; but his experience of Parisian crime was not equal to Signor Rosadi's in Italian. "Tra la Perduta Gente," indeed, is a volume replete with interest divided in almost equal parts between the medical, the legal, and the sociological, and if translated into English would have even more readers than it is now attracting in Italy.

Dec. 16th.

## VIENNA.

(FROM OUR OWN CORRESPONDENT.)

*Celebrations in Honour of Professor Obersteiner and Professor Widerhofer.*

MEDICAL circles in Vienna have quite recently had opportunities of honouring two great men, one who is still working in our midst and one whose work is still held in grateful remembrance. The former is Professor Obersteiner, the famous nerve specialist, who has trained so many of the leading neurologists in both hemispheres. The twenty-fifth anniversary of the inauguration of the Institute for Neurology founded by him in 1882 was duly honoured both by the fellow-workers of the founder and by the medical profession in general. The institute consisted originally of a small room in the old university but by degrees Professor Obersteiner succeeded in raising it to a position of such importance that the Government has now consented to take it over. More than 150 important contributions to the pathology of the brain and nerves have been made by his students, in addition to numerous shorter essays and monographs. Professor Obersteiner himself has been appointed Vice-president of the Brain Commission of the International Association of Academies and he is also an honorary D.Sc. of the University of Oxford. By a generous gift of 200,000 kronen (£8000) he has provided the institute with an ample endowment and he has also handed over to it his library of 26,000 volumes. His bust occupies a prominent position in the institute. Another unveiling of a bust took place quite recently in the University of Vienna, when a well-executed figure of Professor Widerhofer was handed over to the Senate of the university. He was the first medical man in German-speaking countries to devote himself to the diseases of children. He was soon appointed to a specially erected clinic, in which he continued to work for 40 years. He was a member of the group, including also Skoda, Rokitansky, Hyrtl, and Billroth, which shed such lustre on the Medical Faculty in Vienna, and his pupils are now occupying nearly all the prominent positions in children's hospitals in Austria and Germany. Among his various appointments was that of physician to the children of the Emperor Francis Joseph. In the new general hospital now in course of building one ward will be named after him, and his kindness to his poor patients is still remembered, although more than ten years have passed since he gave up practice.

*A New Medical Association.*

A Society for Physical Therapy has been formed in Vienna and has branched off from the old medical association with a view to include all practitioners who have turned to the modern way of treatment by strictly physical means, such as hydrotherapy, electricity, radiotherapy, orthopædic contrivances, and gymnastic exercises. The new association has been very well received by the younger members of the profession who are attracted by the modern methods of treatment, whilst some opposition has been aroused amongst the older men who resent the progress of specialisation. The first two meetings of the new society were a success in every respect; the scientific standard of the papers that were read was good and the cases that were shown were very satisfactory.

*The Injection Treatment of Sciatica.*

Dr. Bum has communicated to the Gesellschaft der Aerzte a paper on the Treatment of Sciatica by means of Infiltration of the Nerve according to the method introduced by Lange of Leipsic. Dr. Bum at first injected a solution of eucaine but he was soon convinced that the curative agent was not the chemical but the mechanical component of the procedure. He therefore uses only a solution of chloride of sodium of 0·8 per cent. strength. The technique of his method was as follows. A point on the flexor side of the thigh was sought where the long head of the biceps cruris muscle was crossed by the lower margin of the gluteus maximus and the injection was made here because there were no vessels or muscles to be avoided. An aseptic syringe entirely made of glass, and having a capacity of 100 cubic centimetres (about 3 fluid ounces) was filled with the saline solution and thrust in until a sudden pain showed that the nerve was reached. The solution which was now injected under continuous pressure expanded the neurilemma and easily broke down any adhesions which might exist. Experiments made on the dead body with coloured liquid showed that the neurilemma was detached from the medullary substance for about five or six inches in both directions. It was sometimes necessary to repeat the injection two or three times within a few days. Dr. Bum showed six patients whom he had treated in this way and who were all able to work now. Altogether he has treated 82 patients by his infiltration method, with 63 per cent. of complete recoveries and 21 per cent. of the cases improved. The contra-indications were symptomatic sciatica, neuritis of the nerve roots, a high degree of arterio-sclerosis, and hysteria. He has not treated acute cases in this way.

*Embolism after Herniotomy.*

Professor Stoerck showed at the same meeting an unusual case of widespread embolism, which occurred eight days after the performance of an operation for umbilical hernia. The embolus first occluded the pulmonary artery and its branches, after which it made its way into the ascending aorta through a pervious foramen ovale and all the branches given off from the arch of the aorta were blocked. The right renal artery and a small splenic artery were likewise affected. All the veins which might have contained the point of origin of the embolism were examined but without result, except that in the vesical plexus thin thrombosed masses were present in some of the veins. Careful examination of the much twisted embolic masses showed their complicated branching and dichotomous distribution and it was most likely that their source lay in the veins of the pelvis. The right kidney was necrosed, the upper pole of the spleen contained an anæmic infarct, and the lungs showed similar small foci. The existence of these conditions justified the assumption that the formation of the embolism had commenced several hours before death, and it may be remarked that the clinical history recorded a severe collapse occurring six hours before death, but the obstruction of the pulmonary artery and the "paradoxical" embolism of the aorta must have taken place only a few seconds before death. Looking at the facts from a surgical point of view in a case like this, where embolism had developed after a few days of very good progress following the operation, Professor Trendelenburg advised surgical interference. He distinguished three varieties of embolism of the pulmonary

artery—namely, (1) those in which the patient died immediately, (2) those in which infarcts took place, and (3) those in which death was delayed for six or eight hours. In the first two of these nothing could be done but in the third one he suggested that the heart should be opened immediately, after which a large trocar should be thrust into the right ventricle and the embolus extracted from the artery through the trocar by suction. In the present case, however, this operation would not have been of any use, because the open foramen ovale permitted the formation of an embolus too extensive to be removed by suction.

Dec. 16th.

## CANADA.

(FROM OUR OWN CORRESPONDENT.)

*Criticisms of the Toronto Hospitals.*

Dr. R. W. Bruce Smith, inspector of prisons and public charities for the province of Ontario, has recently issued a report on the hospitals of Toronto, which report has been taken in hand by Dr. Charles Sheard, the medical health officer of the city, and handed on to the Toronto Board of Control. The result of the severe criticism of both officials will be a conference between the Toronto Board of Control and the authorities of all the hospitals receiving from the city an allowance for all patients sent in on a city order. At the Toronto General Hospital during the last official year there were 953 patients treated on municipal orders out of a total number of 3868. Several of the wards for these patients (and the hospitals now demand from the city for each patient 70 cents per day) it is suggested should be closed as they are reported to be totally unfit for occupancy. The report also condemns certain wards in St. Michael's Hospital. Grace Hospital's present and pressing need is enlargement and better provision for public ward patients. Of the Western Hospital it is said that it needs money and that, though it has a splendid site, the buildings are inadequate. Referring to the General Hospital, Dr. Bruce Smith reported that this hospital was carefully and economically conducted and that the rate of $1.35 per diem for each patient was very satisfactory. Dr. J. N. E. Brown, the superintendent of this hospital, states that $1.35 per day per patient represents the average cost of all, that $1 06 was the cost for city patients, and that from $1 50 to $1.60 was the cost for semi-private and private patients.

*Canadian Penitentiaries.*

According to the report of the Minister of Justice of Canada, for the nine months ending March 31st last there were in the penitentiaries of the country 1433 inmates, as compared with 1407 in 1905–06 and 1224 five years ago. The very gradual increase is attributable to the increasing population and so does not indicate any particular increase in criminality. The population is divided among the penitentiaries as follows: Kingston, Ontario, 458; St. Vincent de Paul, Quebec, 402; Dorchester, New Brunswick, 194; Manitoba, 175; British Columbia, 137; and Alberta, 57. The number of pardons granted in the last seven years was 260, as against 384 granted in the preceding six years. Of the total convicts 757 are Protestants and 666 are Roman Catholics. The parole system has worked satisfactorily. Last year 285 paroles were granted—157 from penitentiaries and 128 from jails and prisons. Five parole licences were cancelled. Since the inception of the Parole Act in 1899 a total of 1645 prisoners have been released. 995 sentences were completed on parole and 530 are not yet completed.

*Death of Dr. D. McN. Parker.*

The Hon. D. McN. Parker, M.D., died in Halifax, Nova Scotia, on Nov. 4th. Dr. Parker was a life-long friend of Sir Charles Tupper, M.D., Bart., whom the King has just appointed to the Privy Council. He was born in Windsor, Nova Scotia, in 1822 and graduated in medicine at the University of Edinburgh in 1845. In 1867 he was made a member of the Legislative Council of Nova Scotia, from which he retired in 1899 on account of ill-health. He was a past president of the Canadian Medical Association, having been its second president, succeeding Sir Charles Tupper who held the office for the first three years of its existence, namely, from 1867 to 1869. Dr. Parker held in the past a number of offices. He has been commissioner of schools, and for 25 years was a governor of Acadia College. He was the first surgeon in Halifax to perform an operation with the use of an anæsthetic, having first had the anæsthetic administered to himself to prove its safety. Dr. Parker also performed the first operation for the removal of ovarian tumours in Halifax, he having assisted Dr. Keith of Edinburgh in such-like operations.

*Precautions against Bubonic Plague.*

Dr. Frederick Montizambert, Director-General of Public Health for Canada, has just returned to Ottawa from an important inspection trip on the Pacific coast. He was sent by the Government to look into the question of bubonic plague and to devise preventive measures with the local quarantine officers in British Columbia which would be effective in preventing the importation of the disease from San Francisco and Seattle where there had been several cases reported. Dr. Montizambert began his investigation at Seattle and conferred with Dr. Watt at the William Head quarantine station at Victoria, British Columbia, and with Dr. C. J. Fagan, secretary of the Board of Health of British Columbia. He also visited the various points on the boundary between British Columbia and the United States and saw that the government regulations were being strictly enforced.

*Psychiatry in Ontario.*

The first step towards the formation of a psychiatric clinic in Toronto has been taken by the board of governors of the University of Toronto. The board has recently appointed Dr. Charles K. Clarke, superintendent of the Toronto Provincial Hospital for the Insane, to the position of professor of psychiatry in the medical department of the University. For the present time the appointment does not involve the relinquishing on the part of Dr. Clarke of his duties in connexion with the Hospital for the Insane. Dr. Clarke was one of the members of the special commission appointed during the past summer to make investigations into the question of the treatment of the insane in Europe. He visited Europe with the other members of that commission, the Hon. Dr. Willoughby and Dr. Edward Ryan, superintendent of the Kingston Hospital for the Insane, and the report of the commission to the Government favoured the establishment by the Ontario Government of psychiatric hospitals in different parts of the province. The Government has decided to establish a clinic in connexion with the Toronto General Hospital.

*Montreal General Hospital.*

The expenditure of the Montreal General Hospital for the quarter ending Sept. 30th exceeded the revenue by the sum of $13,038. The report of the medical superintendent, Dr. S. F. Patch, stated that during that quarter 850 patients were treated to a conclusion, as compared with 932 for the corresponding period in 1906. There were 78 deaths, of which 38 occurred within three days of admission, thus making the mortality-rate for ordinary hospital cases 4·7 per cent. The aggregate number of hospital days was 16,281, an average detention per patient of 19·15 days; the average number of patients per day was 190. In the out-patient departments there were 13,197 consultations, as compared with 11,927 for the corresponding quarter of last year. During the quarter the ambulance responded to 545 calls, compared with 440 for the same period last year.

*Abnormal Death rate among Canadian Indians.*

Dr. Peter H. Bryce, the health officer for the Department of the Interior and Indian Affairs at Ottawa, has just issued a report on the health conditions prevailing in the Indian industrial and boarding schools of the Dominion of Canada. The report is significant as the religious denominations in charge of Indian education have recently asked the Government to take over the control of these schools. These Indian schools are conducted by the Roman Catholic, Anglican, Presbyterian, and Methodist denominations, who receive grants from the Government to assist them in their work. This led to Dr. Bryce being asked to make a report on the conditions prevailing, so last spring he visited all the schools. His report says that of a total of 1537 pupils reported on nearly 25 per cent. are since dead, and one school with an absolutely accurate statement has 69 per cent. of ex-pupils dead. Everywhere almost the invariable cause of death was tuberculosis. Dr. Bryce states that the conditions of the schools demand an immediate and prompt remedy.

*The Water-supply of Toronto.*

Toronto draws its water-supply from Lake Ontario; the pipes are laid on the bottom of the Toronto Bay, into which

the city sewage is discharged. For many years the question of a pure water-supply, and one which would be absolutely in no danger of becoming polluted, has come before the people. At the present time a tunnel is being constructed under Toronto Bay and there is a strong agitation for a trunk sewer and filtration. The estimated cost of such an undertaking is placed by the city's health officer at $6,000,000. Instead of this, however, the city council proposes cheap power brought from Niagara Falls. Towards this end a by-law is to be submitted to the ratepayers at the approaching muncipal elections on Jan. 1st, 1908, to raise $2,500,000 for that purpose.

Dec. 7th.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

*Dentists in the United States Navy.*

THE question of the appointment of dentists to the navy has been under discussion for upwards of 50 years but no legislation has been secured. Dentists are now appointed at naval stations as private practitioners or resident dentists without any rank in the navy. A Bill was before the last Congress empowering the President to appoint dental surgeons to serve the officers and enlisted men of the navy and marine corps. The Bill required that dental surgeons shall have the rank and compensation of acting assistant surgeons in the navy, shall be graduates of standard dental colleges, trained in the several branches of dentistry, and shall pass a physical and professional examination. The Bill failed of passage and now the agitation has begun to secure its passage at the next Congress.

*Use of the Red Cross Emblem.*

Surgeon-General O'Reilly, U.S.A., has made public certain resolutions adopted by the executive committee of the National Red Cross at its meeting of October. The object of these resolutions seems to be to prevent the use of the emblem of the Red Cross by the trades and other organisations. By international agreement in the Treaty of Geneva, 1864, and the revised Treaty of 1906, "the emblem of the Red Cross on a white ground and the words Red Cross or Geneva Cross" were adopted to designate the *personnel* protected by the Convention; the Treaty further provides that "the emblem of the Red Cross or Geneva Cross can only be used, whether in time of peace or war, in sanitary formations and establishments, the *personnel* and material protected by this convention." The American National Red Cross, being designated as the organisation authorised to act in matters of relief under the Treaty, requests that all hospitals, health departments, and like institutions desist from the use of the Red Cross created for the special purpose mentioned, and suggests that for it should be substituted some other insignia, such as a green St. Andrew's cross on a white ground to be named the "Hospital Cross" and used to designate all hospitals, health departments, and like institutions. The Red Cross also requests that all individuals or business firms and corporations who employ the Geneva Red Cross for business purposes should kindly desist from such use and substitute some other distinguishing mark. It is also suggested that in cases where the name and insignia are used as trade marks, their employment should be discontinued within the next three or four years in conformity with the provisions of the Treaty.

*Medicinal Preparations used as Beverages.*

Owing to the remarkable spread of temperance sentiment laws are being enacted in a large number of States, especially in the South, prohibiting the sale of alcoholic beverages. The result is the rapid increase of medicinal preparations containing amounts of alcohol sufficient to classify them as beverages. The Commissioner of Internal Revenue has recently made a ruling which places these so-called medicinal articles under the Revenue laws and hence liable to taxation. Investigations by the bureau indicate that there are three classes of cases arising—viz.: 1. Preparations which are in fact intended to be sold and consumed as beverages and which are really nothing but alcoholic beverages. 2. Preparations which are really medicines, and which are often used as such, but which contain alcohol considerably in excess of what is necessary to hold in solution or preserve the medicinal ingredients; such preparations fall within the category of beverages as known to internal Revenue laws, no matter how they may be sold and used. 3. Preparations which contain no more alcohol than is necessary to hold the medicinal agents in solution; these fall within the classification of medicines.

*Cornell University Medical College.*

The Faculty of the Cornell University Medical College in New York has concluded that too large a proportion of a medical student's time is given up to elementary and non-professional instruction in chemistry, physics, biology, and other kindred subjects upon which the knowledge of diseased conditions is founded. One consequence of this is that too small a proportion of the present four years course is devoted to the specialised information which is imperative in the education of a properly equipped physician. The period of four years is deemed sufficient at present if directed entirely to strictly medical subjects; but otherwise it is not. The president and trustees of Cornell University have consequently decided to adopt the requirements advised by the faculty of the medical college for admission to the course leading to the degree of M.D. In and after 1908 candidates for admission to the Cornell University Medical College must therefore be either (1) graduates of approved colleges or scientific schools; or (2) seniors in good standing in Cornell University or in any other approved college or scientific schools the faculty of which will permit them to substitute the first year of a professional course for the fourth year in arts and science and who will confer upon them the bachelor's degree upon the satisfactory completion of the first year of the course in the Cornell University Medical College; or (3) persons who, while not possessing a bachelor's degree, give evidence by examination that they have acquired an equivalent education and a training sufficient to enable them to profit by the instruction offered in the medical college. In and after 1909 all candidates for admission to the Cornell University Medical College must have at least such knowledge of physics and inorganic chemistry as may be obtained in college by a year's course in these subjects when accompanied by laboratory work; and in and after 1910 all candidates for admission must possess a similar knowledge of biology. In order to avoid refusing exceptional students of unusual abilities who could obtain independently an education equivalent to that implied by a degree from a college or scientific school there will be a committee appointed from the faculties of the different colleges in the University to determine the qualifications of such individuals who may apply for admission witnout possessing the requisite official certificates.

Dec. 6th.

# Obituary.

## EDWARD LIVEING FENN, M.D. EDIN., M.R.C.P. LOND., J.P.

Dr. E. L. Fenn of Alston Court, Nayland, whose death was recorded on Dec. 8th, was the son of the late Dr. Fenn of Nayland and was born in Nayland on August 20th, 1843. He was educated at Sherborne College, afterwards entered King's College, London, and qualified in 1865. A painstaking and hard-working student he was elected to the office of house physician at the hospital. Thence he went to Vienna where he studied for a year and returning to Nayland he joined his father in practice there. On the death of his father he removed to Richmond, Surrey, in 1871, where he took over the practice of Dr. Julius of the Old Palace, Richmond, in partnership with the late Mr. Bateman. Here for 20 years he carried on an extensive and high-class practice and was physician to the Royal Richmond Hospital. In November, 1872, he married a daughter of Dr. Julius and resided at the Old Palace. During his residence in Richmond he took great interest in the public life of the place. He was a member of the municipal vestry and a churchwarden at the parish church. Ill-health compelled him to relinquish his practice at Richmond and in January, 1892, he settled down in Colchester at Grey Friars, East Hill. In February, 1892, he married a second wife, a daughter of Mr. C. J. Todd of Richmond, who survives him. In 1893 he was elected physician to the Essex and Colchester Hospital, which post he held for 10 years; he took also a prominent part in the general management of that institution. He

carried on a practice as consulting physician in the town and neighbourhood, having obtained the Membership of the Royal College of Physicians of London in 1892. In 1903 he finally retired from practice and settled down in his old family residence of Alston Court, Nayland. In October, 1892, Dr. Fenn was chairman of the annual dinner of King's College Hospital and in 1898 he was President of the East Anglian division of the British Medical Association. Dr. Fenn, who was a justice of the peace for Suffolk, was a man of the finest type and one who did honour to his profession. A dignified and stately gentleman, he was universally beloved and esteemed by all who came into contact with him.

# Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At an extraordinary Comitia of the Royal College of Physicians of London on Dec. 12th, and at a meeting of the Council of the Royal College of Surgeons of England on the same date, diplomas of L.R.C.P. and M.R.C.S. were conferred upon the following gentlemen who have passed the Final Examination in Medicine, Surgery, and Midwifery, and have now complied with the by-laws of both Colleges:—

John Lewis, University College Hospital; *Alfred Richardson, Leeds University; and John Lancelot Todd, B.A., M.D. McGill, McGill University.

* M.R.C.S. Diploma granted on Nov. 14th, 1907.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The Council of the above College on Dec. 12th conferred the diploma of Fellow upon 25 candidates who had successfully passed the Final Examination in Surgery, Surgical Anatomy, and Pathology held on Nov. 22nd, 25th, 26th, 27th, 28th, and 29th, for which 63 candidates presented themselves. The following are the names of the gentlemen on whom the Fellowship was conferred:—

Hugh Ainsworth, Captain I.M.S., M.B., Ch.B. Vict., M.R.C.S. L.R.C.P., Victoria University, Manchester, and St. Bartholomew's Hospital; Edwin Maynard, M.R.C.S., L.R.C.P., D.P.H., London Hospital; Richard Drummond Maxwell, M.D. Lond., M.R.C.S., L.R.C.P., London Hospital; William Stuart Vernon Stock, M.B., B.S. Lond., M.R.C.S., L.R.C.P., University College, Bristol; Welby Earle Fisher, M.R.C.S., L.R.C.P., University College Hospital; Alfred John Couzens, M.R.C.S., L.R.C.P., London Hospital; Edward Walter Bain, M.B., B.S. Lond., M.R.C.S., L.R.C.P., London Hospital; John Gay French, M.B., B.S. Lond., M.R.C.S., L.R.C.P., St. Mary's and St. Bartholomew's Hospitals; Millais Culpin, M.B., B.S. Lond., M.R.C.S., L.R.C.P., London Hospital; William Appleyard, M.B., B.S. Lond, M.R.C.S., L.R.C.P., University College Hospital; Samuel Clifford Hayman, M.R.C.S., L.R.C.P., University College, Bristol, and London Hospital; Hubert Chitty, M.B., B.S. Lond., M.R.C.S., L.R.C.P., University College Hospital; Henry Hardwick-Smith, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and St. Bartholomew's Hospital; Wilfrid Edward Brierley, M.B., Ch.B. Vict. and Leeds, M.R.C.S., L.R.C.P., Leeds University; Colin Clarke, M.B., B.S. Lond., M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Harry Tyrrell Gray, M.A., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and St. Thomas's Hospital; Thomas McPherson, B.A., M.D., C.M. McGill, M.R.C.S., L.R.C.P., McGill University and St. Bartholomew's Hospital; Philip Talbot, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P., Victoria University, Manchester; Reginald Jamison, M.A., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P., Oxford University and St. Bartholomew's Hospital; Leonard Ralph Braithwaite, M.B., Ch.B. Vict., Leeds University; Kenneth McKenzie Duncan, M.B., Ch.B. Glasg., Glasgow University and London Hospital; Edward Gillespie, M.B., Ch.B. Glasg., Glasgow University and Middlesex Hospital; James Law Falconer, M.B., Ch.B. Vict., Victoria University, Manchester, and London Hospital; David Ligat, M.B., C.M., D.P.H. Glasg., Glasgow University and London Hospital; and Herbert Frank Shorney, M.B., B.S., M.D. Melb., Melbourne University and Middlesex Hospital.

Licences to practise Dentistry were conferred upon the following gentlemen who have passed the Final Professional Examination and have complied with the by-laws:—

Stanley Bellman, Charing Cross and Royal Dental Hospitals; Ralph Dougherty Bennett, Manchester University; Leonard Webster Biscombe, Charing Cross and Royal Dental Hospitals; John Button, Manchester University; John William Doherty, Guy's Hospital; William Albert Dredge, Guy's Hospital; William Drew, Charing Cross and Royal Dental Hospitals; Harold Gordon Dumayne, Guy's Hospital; John George Fernie, Charing Cross and Royal Dental Hospitals; Edward Ernest Fletcher, Charing Cross and Royal Dental Hospitals; Arthur William Gant, Manchester University; Percy Gee, Liverpool University; Reginald John Gibbings, Guy's Hospital; Joseph Knowles Hargreaves, Manchester University; Ernest Harrison, Manchester University; Adam Friedrich Hochapfel, Guy's Hospital; Graham Hunt, Guy's Hospital; Charles Edward James, Liverpool University; Thomas Neville Jeffries, Birmingham University; Herbert Emlyn Jones, Charing Cross and Royal Dental Hospitals; Arthur Thirlby Knight, Birmingham University; Isaac Levy, Guy's Hospital; Oswald McGowan, M.A. Cantab., Middlesex and National Dental Hospitals; James Frederick Maguire, Charing Cross and Royal Dental Hospitals; Lewis Trevor Bamford Matthews, Birmingham University; Federico Montuschi, M.D. Bologna, Bologna University and Royal Dental Hospital; Francis Richard Henry Myers, Sheffield University; Charles Robert Mower Peaty, Guy's Hospital; Cuthbert Grant Plumley, Bristol; Percy James Proud, Guy's Hospital; Lewis Richter, Durham University; Ernest Guy Robertson, Guy's Hospital; Carl Robert Rudolf, Guy's Hospital; Frank Henry Salter, Charing Cross and Royal Dental Hospitals; Robert Alexander Scott, Guy's Hospital; Herbert Victor Sharp, Guy's Hospital; Sydney Shovelton, Birmingham University; Ashley Weatherhead Smith, Middlesex and National Dental Hospitals; Ivan Scott Spain, Guy's Hospital; William Marshall Swan, Charing Cross and Royal Dental Hospitals; Aubrey Collins Tippett, Charing Cross and Royal Dental Hospitals; Alexander Ivan Ward, Middlesex and Royal Dental Hospitals; Robert Graham White, Charing Cross and Royal Dental Hospitals; and Rowland Talbot Wood, Charing Cross and Royal Dental Hospitals.

UNIVERSITY OF CAMBRIDGE.—The following examiners have been appointed:—State Medicine: Dr. B. Anningson, Professor G. H. F. Nuttall, Mr. Purvis, Dr. R. D. Sweeting, and Dr. A. Newsholme. Tropical Medicine and Hygiene: Professor Nuttall, Dr. C. W. Daniels, and Major W. B. Leishman. Third M.B., Part II.: additional examiner in surgery, Dr. E. D. Paton.—The following degrees have been conferred:—

*M.D.*—J. F. Halls Dally, St. John's.
*M.B., B.C.*—C. Stanley-Clarke, Gonville and Caius.
*M.B.*—C. King, Trinity; H. B. Owen, Gonville and Caius; and G. L. Cox, Christ's.
*B.C.*—B. T. Lang, Trinity.

At examinations held recently the following candidates satisfied the examiners:—

FIRST M.B. EXAMINATION.

*Part I., Chemistry and Physics.*—A. B. Appleton, Downing; S. G. Askey, St. John's; M. Avent, Caius; W. G. Bigger, Queen's; E. J. Boyd, Sidney Sussex; E. J. Y. Brash, St. John's; E. N. Butler, Clare; D. G. Cherrington, B. K. T. Collins, K. B. Dickson, and E. Donaldson, Trinity; G. D. East and J. V. Fiddian, Emmanuel; R. H. Growse, Caius; C. Helm, King's; W. S. Herman, Sidney Sussex; G. J. Hill, Peterhouse; A. N. Hooper, Emmanuel; T. J. H. Hoskin, Trinity; G. D. Jameson, Pembroke; D. W. Jones, Clare; T. Jones, Sidney Sussex; H. A. Lucas, Trinity; M. MacGregor and A. R. MacMullen, Caius; F. D. Marsh, Trinity; W. H. Marshall, Pembroke; O. G. Morgan, Clare; J. O. Morris, Emmanuel; M. W. Paterson, St. John's; D. V. Pickering and F. S. L. Piggott, Emmanuel; W. A. Pocock, Pembroke; Ff. Roberts, Clare; A. N. Rushworth, Trinity; L. T. Rutherford, Clare; C. G. Sharp, B.A., St. John's; L. W. Shelley, Caius; G. W. Spencer and R. Stansfeld, St. John's; M. T. W. Steedman, Clare; H. M. Stephenson, Caius; A. V. Stocks, St. John's; W. J. F. Symons, Sidney Sussex; E. S. Taylor, King's; K. S. Thomson, St. John's; L. H. D. Thornton, Emmanuel; S. J. Titterton and J. R. A. D. Todhunter, B.A., Caius; T. Warrington, Emmanuel; M. H. Watney, Trinity; Ll. M. Weeks, Caius; and K. J. Yeo, Emmanuel.

*Part II., Elementary Biology.*—A. B. Appleton, Downing; C. S. Atkin and M. Avent, Caius; H. A. Bell, Jesus; G. A. Beresford, St. John's; R. N. B. Byatt, Clare; M. H. Cane, King's; G. D. Compston, Trinity Hall; E. H. Copeman, Christ's; J. L. Crommelin-Brown, Trinity; W. E. de Souza, Clare; K. B. Dickson, Trinity; J. V. Fiddian, Emmanuel; L. A. Graham, Caius; W. S. Herman, Sidney Sussex; T. J. H. Hoskin, Trinity; G. D. Jameson, Pembroke; J. D. Jones, H. Selwyn; J. S. Kennedy, King's; J. D. Legge-Currie, Clare; G. A. Lilly, Caius; O. G. Morgan, Clare; J. O. Morris, Emmanuel; W. A. Pocock, Pembroke; B. C. Pring, Trinity; H. A. Richards, B.A., and Ff. Roberts, Clare; C. G. Sharp, B.A., St. John's; W. J. D. Smyth, B.A., Pembroke; V. F. Soothill, Emmanuel; A. E. Staffurth, Sidney Sussex; R. Stansfeld, St. John's; R. J. Tweedy and A. R. S. Warden, Caius; T. Warrington, Emmanuel; H. A. Watermeyer, Caius; M. H. Watney, Trinity; H. C. Whittall, Caius; and C. L. Whittard, Trinity.

THIRD M.B. EXAMINATION.

*Part I., Pharmacology and General Pathology.*—C. J. Blaikie, B.A., and D. W. A. Bull, B.A., Caius; J. S. Burn, B.A., and L. S. T. Burrell, B.A., Trinity; W. H. Cam, B.A., Caius; W. T. Chaning-Pearce, B.A., Emmanuel; N. L. Clarke, Christ's; R. Crawford, B.A., Jesus; F. C. Davies, B.A., Downing; K. J. A. Davis, B.A., King's; H. G. Dearden, B.A., Caius; M. E. Dellschaft, B.A., Jesus; J. R. Dick, B.A., Downing; W. H. F. Eales, B.A., Emmanuel; R. Fisher, B.A., Sidney Sussex; H. G. Frean, B.A., St John's; T. R. Glynn, B.A., Clare; L. H. Goh, M.A., Emmanuel; S. Gordon, B.A., Pembroke; J. L. Graham-Jones, B.A., Emmanuel; W. C. Hodges, B.A., Trinity Hall; G. Holmes, Caius; B. Hughes, M.A., H. Selwyn; J. S. Jobson, B.A., Sidney Sussex; C. E. M. Jones, B.A., King's; L. R. King, B.A., Pembroke; A. C. C. Lawrence, B.A., Trinity; G. C. Lim, B.A., St. John's; N. F. Lock, Caius; H. G. Monteith, B.A., Pembroke; C. G. H. Morse, B.A., N. Mutch, B.A., and T. E. Osmond, B.A., Emmanuel; W. S. Perrin, B.A., Caius; B. A. Playne, B.A., Pembroke; F. S. Poole, B.A., Sidney Sussex; R. P. M. Roberts, Queen's; J. B. Ronaldson, B.A., St. John's; L. W. K. Scargill, M.A., Trinity Hall; E. F. Shann, B.A., and A. L. H. Smith, Caius; A. E. Stansfeld, B.A., St. John's; H. S. C. Starkey, B.A., Downing; C. J. Stocker, B.A., and A. W. Stott, B.A., Trinity; W. W. Treves, B.A., Caius; L. B. C. Trotter, B.A., Clare; G. W. Twigg, B.A., and C. St. A. Vivian, B.A., Caius; J. Walker, B.A., Clare; J. M. Wallace, B.A., Downing; and W. E. Wallis, B.A., Clare.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* The Medical Faculty has lost no time in arranging for the filling up of the chair of Pharmacology which Professor Liebreich unfortunately is obliged by illness to resign. The selections are (1) Professor Hans Meyer of Vienna, (2) Professor Gottlieb of Heidelberg, and (3) Professor Straub of Freiburg. It is thought, however, that Professor Meyer will be unwilling to leave Vienna. Dr. Stahelin has been recognised as *privat-docent* and Dr. Gierke as *privat-docent* of Anatomy. Dr. Liepmann has been recognised as *privat docent* of Gynæcology, and Dr. Wollenberg as *privat-docent* of Surgery.—*Breslau:* Dr. Ziegler has been recognised as *privat-docent* of Medicine.—*Grenoble:* Dr. Ternier has been appointed Professor of Clinical Medicine.—*Halle:* Dr. Albert Oppel has been recognised as *privat-docent* of Anatomy.—*Heidelberg:* Dr. P. Morawitz has been recognised as *privat-docent* of Medicine.—*Königsberg:* Dr. Askanazy, *privat-docent* of Medicine, has been granted the title of Professor.—*Lemberg:* Dr. Theophil Zalewski has been recognised as *privat docent* of Otology.—*Marburg:* Dr. Ackermann has been recognised as *privat-docent* of Physiology.—*Marseilles:* Dr. Gerber has been appointed Professor of Materia Medica.—*Munich:* Dr. Herzog has been recognised as *privat-docent* of Otology.—*Rostock:* Dr. Bennecke has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Rouen:* Dr. Halipré has been appointed Professor of Histology.

THE CORPORATION OF THE CITY OF LONDON AND THE SALE OF FOOD AND DRUGS ACTS.—At the meeting of the Corporation of the City of London on Dec. 12th the sanitary committee reported that amongst other articles submitted to the public analyst, for which certificate of sophistication had been received, was a sample of tincture of cinchona, 15 per cent. deficient in cinchona alkaloids, and the committee recommended that the vendor should be cautioned. Mr. William Walter Green, who represents the Ward of Tower (which includes Mincing-lane) on the Corporation, drew the court's special attention to this analysis and expressed regret that the sanitary committee had not passed the evidence on to its solicitor for him to take such action as he deemed necessary. Mr. Green said that he had drawn the medical officer's attention to the fact that the sanitary committee was dealing with the "Sale of Food and *Drugs* Acts," whereas 80 per cent. of the samples submitted to the analyst were butter and milk; he urged the committee to test a larger quantity of samples of drugs and spices, and in all cases where the analyses proved "sophistication" that prosecutions should be pressed by the corporation. Mr. Green added that the 15 per cent. deficiency in the tincture of cinchona was a bad case, more especially seeing that the price of cinchona at the present moment was lower than at any previous period; it was a serious matter that medicines or tonics required to restore health should be deficient in strength and he should like to see the Corporation of London protecting the public in this matter.

CENTRAL MIDWIVES BOARD.—Special meetings of the Central Midwives Board were held on Dec. 12th and 13th at Caxton House, Westminster, Dr. F. H. Champneys being in the chair. The Board considered charges alleged as stated after their names against the following midwives whose names were ordered to be struck off the roll. Emily Armitage, that being in attendance at a confinement she was guilty of negligence and misconduct; the placenta and membranes not having been completely expelled two hours after the birth of the child, she did not explain that the attendance of a registered medical practitioner was required. Ellen Watson, that while in attendance at a confinement she was guilty of negligence; the placenta and membranes not having been completely expelled two hours after the birth of the child, she did not explain that the attendance of a registered medical practitioner was required. Ann Wallwork, that being in attendance at a confinement she was guilty of negligence and misconduct; the patient being ill and feverish she failed to take her temperature on that or subsequent days, nor did she explain that the attendance of a registered medical practitioner was required. Harriet Jane Bigney, that being in attendance at a confinement she was guilty of negligence and misconduct; the patient being ill she failed to take her pulse or temperature, or to explain that the case was one in which the attendance of a registered medical practitioner was required, but administered medicine on her own responsibility; the patient suffering from puerperal fever as she well knew, she left her and attended as a midwife at another confinement without having disinfected herself, her clothing, or her appliances to the satisfaction of the local supervising authority, as required by Rule E 5. Martha Bullamore, that being in attendance at a confinement she was guilty of negligence and misconduct; the patient being ill, suffering from sickness and diarrhœa, she did not explain that the attendance of a registered medical practitioner was required; the patient suffering from puerperal fever, as she well knew, she attended as a midwife at another confinement without having disinfected herself. Sarah Elizabeth Carford, that she had been convicted of unlawfully supplying lead made up in the form of pills knowing that the same were intended to be used with intent to procure abortion. Ada Charlotte Chowne, that she had been convicted of wilfully neglecting two infants intrusted to her to nurse. Helen Concannon, that having been duly suspended by lawful authority from practice as a midwife in order to prevent the spread of infection she nevertheless, while still under suspension, attended confinements as a midwife. Annie Dewhirst, that being in attendance at a confinement she was guilty of negligence and misconduct. She did not wash the patient's external parts or swab them with an antiseptic solution before making the first internal examination or after the termination of labour, as required by Rule E 7, or at any time during her attendance. The perineum being seriously ruptured she did not explain that the attendance of a medical practitioner was required. Elizabeth Willis, that being in attendance at a confinement, medical assistance having been sent for, she failed to notify the fact to the local supervising authority; that stillbirths having occurred in her practice she failed to notify these facts to the local supervising authority. Helena Zwirn, Barbara Watson, Mary West, Mary Sims, Mary Jane Waggott, Mary Sheppard, and Mary Jane Goulbourne, that they did not use or possess the appliances and antiseptics required by the rules. Sarah Hartley, that being in attendance at a confinement and having been informed by the inspector of midwives that the patient's temperature was 103° F. and that immediate medical help was necessary, she did not until the next day explain that the attendance of a registered medical practitioner was required. Mary Catherine Colbert and Barbara Morgan, that they were intemperate. The following midwives were censured after the Board had considered charges alleged against them: Eleanor Bamford, Sarah Carr, Mary Ann Bradford, Martha Agnes Russell, Mary Ann Scadden, and Mary Ann Simpson. The following midwives were cautioned after the Board had considered charges alleged against them: Caroline Ansell, Susan Davis, Louisa Doe, Eliza Jacobs, Harriet Leggett, and Martha Main.

BEQUESTS TO MEDICAL MEN BY PATIENTS.—M. Colleu, writing in the *Revue de Médecine Légale*, argues that the only conditions under which a medical man is, in France, absolutely precluded from accepting such a bequest are the following: (1) When the beneficiary has been in attendance during the testator's last illness (but a medical man in constant attendance is not on the same footing as a consultant whose opinion is only asked for occasionally); (2) when the bequest has been made during this last illness; and (3) when it is this particular illness which has proved fatal. If these conditions are not fulfilled the medical man may accept the bequest. There are, however, two exceptions to the above prohibitory conditions—namely, when the medical man is a relative of the patient and when the bequest to the medical man, made by the patient during his last illness for which he is receiving treatment and from which he actually dies, is made specifically as a medical fee proportionate to the means of the deceased and to the services rendered. The French law allows a patient to provide for the payment of his medical attendant's fees in this way.

THE NURSING OF THE OUT-PATIENT MATERNITY CASES OF THE GENERAL INFIRMARY AT LEEDS.—Up to now there has not been any provision made for the nursing of the cases attended by the students of the medical school in connexion with the out-patient maternity department of the General Infirmary. About a couple of years ago Dr. J. B. Hellier, who is obstetric physician to the infirmary, brought before the board the statistics dealing with a period of ten years from which it was apparent that the results were extremely

good and that the mortality was remarkably low. For some time, however, it has been felt that the comfort and safety of the patients would be increased if some trained nursing could be secured after the labour and if possible some attendance on the part of a nurse during the confinement. Arrangements have therefore been entered into with the authorities of the District Nurses' Institution who have agreed to keep two nurses specially reserved to attend under the students on cases of this kind. These nurses will be changed every two months and thus in the course of a year 12 nurses will receive a training of some value. It should be stated that every nurse to whom the duty is allotted has been through a course of hospital training.

DEATH OF A CENTENARIAN.—Mrs. Jane Cuttance died at Falmouth on Dec. 13th, aged 101 years. The deceased was born at Falmouth on Feb. 22nd, 1806. She was a sister of the late Dr. James Jago of Truro.

THE WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY.—The Children's Christmas tree entertainment will take place at the hospital, 73, Welbeck-street, London, W., on Friday, Dec. 27th, at 3 P.M.

UNREMUNERATIVE WORK.—At a recent meeting of the Tiverton (Devon) board of guardians the appointment of a medical officer for the Hockworthy district, at a salary of £15 per annum, came under discussion. It was stated that the medical officer who had recently resigned the post had spent annually more than that sum for the medicine supplied to the paupers.

SANATORIUMS FOR TUBERCULOSIS.—On Dec. 9th the public health committee of the Cardiganshire county council held an inquiry at Aberystwyth as to the necessity for the establishment of a hospital for the use of patients suffering from pulmonary tuberculosis within the county. Medical officers, sanitary inspectors, and others interested in the question were invited to attend and to express their views with regard to the necessity for the proposed hospital and also with regard to the proposal that the county council should subsidise the sanatorium recently established at Alltymynydd. A number of medical men spoke as to the necessity for provision to treat consumption owing to the exceptionally high mortality from the disease in the county which was attributed to physical conditions, neglect of the rules of health, and the fact that many people returned from industrial centres to die in their native districts. It was stated that the Alltymynydd sanatorium for West Wales is practically completed but a debt of about £600 remains. The county council has passed a resolution to contribute £250 toward the building fund, with £65 for the annual maintenance of one bed. The inquiry and other formalities were rendered necessary in order to legalise the contribution, which also necessitates the adoption of the Isolation Hospitals Acts.

## BOOKS, ETC., RECEIVED.

AMERICAN LARYNGOLOGICAL ASSOCIATION, New York. (Secretary: Dr. J. E. NEWCOMB, 118, West 69th Street, New York City.)

Transactions of the Twenty-ninth Annual Meeting of the American Laryngological Association held at Washington, D.C., May 7th, 8th, and 9th, 1907. Price not stated.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, London, W.C.

The Maternity Nurses' Daily Guide or Pocket-book of Reference. By Gertrude C. Marks, Certificated, Obstetrical Society, London; Registered, Central Midwives' Board, London; late of Queen Charlotte's Hospital. Price 1s. 6d. net.

CHURCHILL, J. AND A., 7, Great Marlborough-street, London, W.

Remarks on the Uses of Some of the Bazaar Medicines and Common Medical Plants of India. By Edward John Waring, C.I.E., M.D., F.R.C.P.Lond., Surgeon-Major (retired), His Majesty's Indian Army; Editor of the Pharmacopœia of India, &c. Edited by Charles Pardey Lukis, M.D., F.R.C.S., Lieutenant-Colonel, Indian Medical Service; Principal and Professor of Medicine, the Medical College of Bengal; and Dean of the Faculty of Medicine of the University of Calcutta. Sixth edition. Price 6s. net.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XXVII. Session 1906–1907. With List of Officers, Members, &c. Price 12s. 6d. net.

CONSTABLE, ARCHIBALD, AND CO., LIMITED, 10, Orange-street, Leicester-square, London, W.C.

The Essentials of Cytology. An Introduction to the Study of Living Matter, with a Chapter on Cytological Methods. By Charles Edward Walker, Assistant Director of the Cancer Research, Liverpool, and Honorary Lecturer in Cytology to the School of Tropical Medicine in the University of Liverpool; formerly Demonstrator of Zoology in the Royal College of Science, London. Preface by Professor C. S. Sherrington, F.R.S. Price 7s. 6d. net.

DENT, J. M. AND CO., 29 and 30, Bedford-street, London, W.C.

School Hygiene. A Handbook for Teachers of All Grades, School Managers, &c. By Herbert Jones, D.P.H. Camb., Fellow and Honorary Secretary of the Incorporated Society of Medical Officers of Health, Fellow of the Royal Sanitary Institute, Member of the Epidemiological Society. Price 2s.

ENGELMANN, WILHELM, Leipzig.

Diagnostik der Bewegungsstörungen der Augen. Von Dr. med. E. Landolt in Paris. Price M.3.60.

FISCHER, GUSTAV, Jena.

Handbuch der Arbeiterkrankheiten. Herausgegeben von Dr. Theodor Weyl in Charlottenburg. Price, paper, M.22; bound, M.24.50.

FROWDE, HENRY, Oxford University Press, London, New York, and Toronto.

The World's Classics. Price 1s. each net. XCIX. The Poems of Samuel Taylor Coleridge. With an Introduction by A. T. Quiller-Couch.—CXL. The Three Clerks. By Anthony Trollope. With an Introduction by W. Teignmouth Shore.—CXLI. Agnes Grey. By Anne Brontë.—CXLIV. The Life of John Sterling. By Thomas Carlyle. With an Introduction by W. Hale White.—CLI. and CLII. The Adventures of Gil Blas de Santillana. By Alain-René Lesage. Translated by Tobias Smollett. With an Introduction and Notes by James Fitzmaurice-Kelly, Fellow of the British Academy.

LEWIS, H. K., 136, Gower-street, London, W.C.

The Opsonic Method of Treatment. A Short Compendium for General Practitioners, Students, and Others. By R. W. Allen, M.B., B.S. Lond., Pathologist to the Royal Eye Hospital, London, S.E.; late Gull Student of Pathology, Guy's Hospital, London, S.E. Price 5s. net.

LONDON HOMŒOPATHIC PUBLISHING COMPANY, 12, Warwick-lane, London, E.C.

Thomas Skinner, M.D. A Biographical Sketch. By John H. Clarke. Price not stated.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, London, E.C.

Comparative Electro Physiology. A Physico-Physiological Study. By Jagadis Chunder Bose, M.A., D.Sc., Professor, Presidency College, Calcutta. Price 15s. net.

MURRAY, JOHN, Albemarle-street, London, W.

The Licensed Trade. An Independent Survey. By Edwin A. Pratt, Author of "Licensing and Temperance in Sweden, Norway, and Denmark," "The Transition in Agriculture," &c. Price 1s. net.

ROUSSET, JULES, 1, Rue Casimir-Delavigne et 12, Rue Monsieur-le-Prince, Paris.

La Gastrectomie. Histoire et Méthodes Opératoires. Par A. Monprofit, Professeur de Clinique Chirurgicale à l'École de Médecine, Chirurgien de l'Hotel Dieu; Président du XIXe Congrès Français de Chirurgie. Price Fr.6.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, London, W.C.

The Matron: Her Duties and Responsibilities. Including Principles of Economy in Institutions. Price 2s. 6d. net.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

La Pratique de la Médecine. Par William Osler, Professeur Royal à l'Université d'Oxford. Traduction Française sur la Sixième Édition, par les Docteurs M. Salomon, Chef de Clinique à la Faculté, et Louis Lazard, Ancien Interne de l'Hôpital de Rothschild. Préface du Dr. Pierre Marie. Price Fr.25.

THE MACMILLAN COMPANY, New York.

Primary Nursing Technique for First-Year Pupil Nurses. By Isabel McIsaac, Graduate of the Illinois Training School for Nurses; formerly Superintendent of the Illinois Training School for Nurses. Price 3s. net.

Immunochemistry. The Application of the Principles of Physical Chemistry to the Study of the Biological Antibodies. By Svante Arrhenius. Price 7s. net.

THE YEAR BOOK PUBLISHERS, 40, Dearborn-street, Chicago. (GILLIES, G. AND CO., 28, Gibson-street, Hillhead, Glasgow.)

The Practical Medicine Series. Under the General Editorial Charge of Gustavus P. Head, M.D. Volume VIII. Materia Medica and Therapeutics, Preventive Medicine, and Climatology. Edited by George F. Butler, Ph.G., M.D.; Henry B. Favill, A.B., M.D.; and Norman Bridge, A.M., M.D. Series 1907. Price 5s.

VIGOT FRÈRES, 23, Place de l'École-de-Médecine, Paris.

Comment Épurer son Eau. Par F. Malméjac, Docteur en Pharmacie; Pharmacien Major de 2e Classe. Price Fr.3.50.

Traité Clinique et Thérapeutique des Maladies de l'Appareil Respiratoire. Par G. Carrière, Professeur Agrégé à l'Université de Lille, Chargé des Cours de Clinique Médicale des Maladies des Enfants et de Thérapeutique, Lauréat de l'Academie de Médecine. Deuxième Édition, revue et augmentée. Price Fr.15.

Traité Pratique d'Analyse des Denrées Alimentaires. Par E. Gérard, Professeur de Pharmacie et de Pharmacologie à l'Université de Lille, et A. Bonn, Directeur du Laboratoire Municipal de la Ville de Lille. Price Fr.15.

Analytique de l'Esprit Humain et de la Vie (Bio-Animisme). Par le Dr. J. A. Molinié, Ancien Interne de l'Hôpital International. Price Fr.2.

Technique Chirurgicale Journalière au Lit du Malade. Par le Dr Adrien Besson, Maître de Conférences à la Faculté Libre de Médecine, Ancien Chef de Clinique Chirurgicale à l'Hôpital de la Charité, Chirurgien du Dispensaire-École de la Croix-Rouge. Avec Lettre-Préface de M. le Professeur Duret. Deuxième Edition, revue et augmentée. Price Fr.3.

WILEY, JOHN, AND SONS, New York. (CHAPMAN AND HALL, LIMITED, London.)

A Text-book of Organic Chemistry. By A. F. Holleman, Ph.D., F.R.A. Amst., Professor Ordinarius in the University of Amsterdam. Translated from the Third Dutch Edition by A. Jamieson Walker, Ph.D. Heidelberg, B.A., Head of the Department of Chemistry, Technical College, Derby, England, assisted by Owen E. Mott, Ph.D. Heidelberg. With the Coöperation of the Author. Second English edition, rewritten. First thousand. Price $2.50 or 10s. 6d. net.

Organic Chemistry, including Certain Portions of Physical Chemistry. For Medical, Pharmaceutical, and Biological Students. (With Practical Exercises.) By H. D. Haskins, A.B., M.D, Instructor in Organic and Bio-Chemistry, and H. M. Hanna Fellow, Medical Department, Western Reserve University; Professor of Chemistry, Cleveland School of Pharmacy; and J. J. R. Macleod, M.B. Aberd., D.P.H. Camb., Professor of Physiology, Western Reserve University. First edition. First thousand. Price, cloth, $2.00 net, or 8s. 6d. net.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CASSIDY, M. A., M.B., B C. Cantab., has been appointed Resident Assistant Physician at St. Thomas's Hospital.

DEVANE, J. F., M.B., B.Ch., D.P.H., has been appointed House Surgeon at the County Infirmary, Limerick.

GUNNING, C. J. H., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Ophthalmic Department at St. George's Hospital.

HAWTHORNE, C. O., M.D. Glasg., M.R.C P. Lond., has been appointed Examiner in Medicine and Clinical Medicine in the University of Glasgow.

MORRISON, J. T. J., M.B. Cantab., F.R.C.S. Eng., has been appointed Examiner in Medical Jurisprudence at the University of Glasgow.

NICOL, J. H., M.B., M.S. Glasg., has been appointed Examiner in Surgery at the University of Glasgow.

NITCH, CYRIL A. R., M.S. Lond., F.R.C.S. Eng., has been appointed Surgeon-in-Charge of Out-patients at St. Thomas's Hospital.

ROBB, D. M., M.B., Ch.B. Edin., has been appointed Senior House Surgeon at the Clayton Hospital, Wakefield.

SLOAN, SAMUEL, M.D., M.S. Glasg., has been appointed Examiner in Midwifery at the University of Glasgow.

SWEETING, R. DEANE, M.D. Dub., D.P.H. Camb., has been re-appointed Examiner in State Medicine at the University of Cambridge.

WILMOT, E. DARWIN, M.B., Ch.B. Edin., has been appointed Junior House Surgeon at the Clayton Hospital, Wakefield.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £80 per annum, with board, washing, and lodging.

BARBADOS, GENERAL HOSPITAL.—Junior Resident Surgeon. Salary £200 a year, with quarters.

BERMONDSEY INFIRMARY, Lower-road, Rotherhithe, S.E.—First Assistant Medical Officer. Salary £170 per annum, with rations, washing, apartments, and attendance.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Third House Surgeon, unmarried. Salary £50 per annum, with board and residence.

BURSLEM, BOROUGH OF.—Medical Inspector of Children in Public Elementary Schools (female). Salary at rate of £150 per annum, rising to £200.

CARDIFF INFIRMARY.—Medical Man in Charge of the Electrical Department. Salary £150 per annum.

CARDIFF UNION WORKHOUSE.—Assistant Medical Officer, unmarried. Salary £130 per annum, with rations, apartments, attendance, and washing.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—House Surgeon, unmarried. Salary £80 per annum.

DERBYSHIRE ROYAL INFIRMARY.—Second House Surgeon, House Physician, and Assistant House Surgeon. Salary of two former £100 per annum, and of latter £60 per annum, with apartments, board, &c., in each case.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Second Medical Officer for six months, renewable. Salary at rate of £40 per annum, with luncheon and tea. Also Medical Officer for the Electrical Department.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London, S.E.—Clinical Assistants in the Out-patient Department.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £50, with board, residence, and laundry.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Casualty Medical Officer. Salary £200 per annum, with lunch.

HUDDERSFIELD INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

INDIA OFFICE, LONDON.—Sixteen Commissions in the Indian Medical Service.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary at rate of £50 per annum, with board, apartments, and washing.

LONDON, UNIVERSITY OF.—Examiners in Chemistry, Physics, Botany, Zoology, Medicine, Surgery, Pharmacology, Mental Disease and Psychology, and Pathology.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £175 per annum, with quarters, attendance, &c.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer for the New Crossley Sanatorium, Delamere Forest, Cheshire. Salary £100 per annum, with board, apartments, and laundry.

MANCHESTER, UNIVERSITY OF.—External Examiner in Obstetrics and Diseases of Women.

MIDDLESEX HOSPITAL, W.—Resident Medical Officer, unmarried. Salary £200 per annum, with residence and board.

NEW HOSPITAL FOR WOMEN, Euston-road.—Medical Women as Clinical Assistants in the Out-patient Department.

NORTHAMPTON GENERAL HOSPITAL.—House Surgeon. Also Assistant House Surgeon, unmarried. Salary of former £90 and of latter £50 per annum, with apartments, board, washing, and attendance in each case.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Physician and House Surgeons for six months. Salary at the rate of £60 per annum, with board, residence, and laundry.

NOTTINGHAM CHILDREN'S HOSPITAL.—House Surgeon (female) for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

PADDINGTON INFIRMARY AND WORKHOUSE.—Medical Officer, unmarried, for six months. Salary at rate of £72 per annum, with board, lodging, and washing.

PRESTON ROYAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board, washing, &c.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Conservator of the Museum.

ST. GEORGE'S UNION INFIRMARY, Fulham-road, West Brompton, S.W.—Second Assistant Medical Officer. Salary £120 per annum, with board, residence, and washing.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Resident Medical Officer. Salary £105, with residence and attendance.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with residence, board, and allowance for laundress.

SHEFFIELD, EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

SHEFFIELD, UNIVERSITY OF.—Demonstrator in Anatomy. Salary £150 per annum.

WADSLEY, NEAR SHEFFIELD, WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary £140 per annum, rising to £160, with board, &c.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Maybole, in the county of Ayr; at Falmouth, in the county of Cornwall, on Dec. 27th; and at Cinderford, in the county of Gloucester, on Jan. 1st, 1908.

# Births, Marriages, and Deaths.

## BIRTHS.

FRASER.—On Dec. 11th, at The Circus, Bath, the wife of Forbes Fraser, F.R.C.S Eng., of a daughter.

STREET.—On Dec. 13th, at Cranfield, Woburn Sands, the wife of Albert Ernest Street, M.R.C.S., L.R.C.P., of a daughter.

## MARRIAGE.

ASH-STREETER.—On Dec. 14th, at St. George's, Hanover-square, W., by the Rev. D. Anderson, Rector, Edwin Lancelot Ash, M.B. M.R.C.S., of 30, Harley-street, W., to Mabel Ethel, daughter of the late Captain James Jackman Streeter of Streatham, and niece of the late Major F. Callaway, R.M.A.

## DEATHS.

ABBOTT.—On Dec. 16th, at Roche, R.S.O., Cornwall, Charles Edward Abbott, M.R.C.S., aged 55 years.

LANGTON.—On Dec. 5th, at The Chestnuts, Chertsey, Surrey, suddenly, Charles Baring Tyndal Langton, M.D., M.R.C.S., L.R.C.P., youngest son of the late Rev. Thomas Hamilton Langton, of Langton, Lincolnshire, and Trollaby, Isle of Man.

MASINA.—On the 24th November, at Warden-road, Malabar Hill, Bombay, Alamai (Avabai), the infant daughter of H. M. Másiná, F.R.C.S., aged 11 months and 9 days.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## LOCAL MEDICAL OFFICERS OF HEALTH.

THE borough of Chard, Somersetshire, has recently elected a medical officer of health. The municipal authorities of Chard are apparently unwilling that a local medical man should look after the health of the borough, for the last medical officer lived in Axminster, some ten miles from Chard, and the newly elected medical officer also lives there. There were only three applicants for the post—one from Axminster, one from Crewkerne, and one from Chard. On a vote being taken at the council meeting the Chard candidate and the Axminster candidate received eight votes each, whereupon the mayor gave his casting vote in favour of the Axminster candidate. The voting seems to have been swayed by some remarks made by Alderman Mitchell who is reported as saying that "When a medical man had patients in the town it was a very awkward thing to have a rival practitioner in the case of an outbreak calling upon them." The difficulty here alluded to scarcely arises in any case where the medical practitioners concerned show ordinary common sense, and the whole subject has been dealt with in some articles published in THE LANCET in January and February, 1895, and reprinted as a pamphlet.

## THE POWERS OF THE LAW.

*To the Editors of* THE LANCET.

SIRS,—I was recently subpœnaed to give evidence on behalf of a patient whom I had seen four years ago and whom I had declined to attend further. I was under the subpœna for five weeks, out of which time I was told to hold myself "in readiness to attend on receipt of a telegram" for over 20 days. I gave notice on receipt of the subpœna that I should claim ten guineas for holding myself in readiness to attend. The case came to an abrupt termination and I was not called. I sent in my claim for ten guineas, which was repudiated and described as "an extraordinary request."

As far as I have been able to ascertain I have not any legal redress, in spite of the facts that I have had considerable annoyance, that my freedom of action has been seriously interfered with, and that I have been put to expense to keep myself in readiness for the receipt of a telegram.

The question, in my opinion, concerns the whole medical profession.

I am, Sirs, yours faithfully,

Dec. 18th, 1907. F.R.C.S.E.

*** We fear that our correspondent is without remedy.—ED. L.

## THE BATTLE OF THE CLUBS.

THE practitioners of Alfreton (Derbyshire) and District are up in arms against the rates of pay in their sick clubs, and at a meeting held at Alfreton on Nov. 21st, Dr. J. J. Bingham being in the chair, the following resolutions were passed unanimously:—

I. That the rate of pay of all sick clubs be not less than four shillings per member per annum. This rate to apply to all members—men, women, and juveniles.

II. That no discount be given to sick clubs in the form of rebates, discount, or presents.

III. That no medical man become an honorary member of any sick club, and that those who are already honorary members resign their honorary membership.

IV. That members of a sick club who do not pay to any doctor through that sick club shall in future be charged for Club Notes.

V. That none of those present shall take over any sick club from any medical man on account of a dispute arising from his demand that these resolutions be carried out.

VI. That copies of these resolutions be sent to each sick club secretary whose club is affected by them.

VII. That these resolutions come into force at the end of the current club year.

We trust that this prompt and energetic action will prove effective.

## A GRIEVANCE.

WE have received the following letter:—

*To the Editors of* THE LANCET.

SIRS,—Having to undergo a slight operation lately I thought I would read up the article on Surgery in the "Encyclopædia Britannica." I was greatly astonished to find the subject set forth with a fulness of detail surely quite out of place in a work intended to be read by the general public. In the case of a nervous woman faced with a serious operation, the reading of such an article might have most mischievous results. In medical matters the possession of a little knowledge may often be a dangerous thing to the lay mind. Yours truly,

We are in cordial agreement with our correspondent's last sentence, but we cannot understand why she is angry at her search being successful. The incident reminds us of the story of the two old ladies at the seaside who complained to the town council that they could from their house distinctly see the gentlemen bathing if they looked at them—through a telescope.

## CHIRURGERY.

*To the Editors of* THE LANCET.

SIRS,—Do any of the readers of THE LANCET know a publication on the culture and training of the surgeon's hand?

I am, Sirs, yours faithfully,

Yokohama, Nov. 25th, 1907. DR. PARAVICINI.

## WELLCOME'S PHOTOGRAPHIC EXPOSURE RECORD AND DIARY.

THE 1908 edition of this useful little book contains valuable information to all those interested in practical photography. Attached to the cover of the diary is an "exposure calculator" by which the actual determination of correct exposure can be made. In addition to this there are tables giving the value of the light at all times of the day and year, some information concerning telephotography, copying, enlarging, reducing, and printing in artificial light. It is a complete diary, containing pages for memoranda, together with ruled pages for recording the details of exposure. It is published in three editions, the first for the Northern Hemisphere, the second for the Southern Hemisphere, and the third for the United States of America. The book is inclosed in a neat cover with pencil and pocket, and cannot fail to please many photographers. The price of the diary is 1s., and it is published by Messrs. Burroughs, Wellcome, and Co., Snow-hill Buildings, London, E.C.

## MILNE'S IODINE-SPIRIT CATGUT.

THE Galen Manufacturing Company, Limited, has sent us a sample of its surgical catgut. It is prepared by means of iodine and is preserved in spirit. The sample which we have examined is smooth and pliable and it is stronger than much of the catgut which is sold ready for use. We can speak favourably of it as likely to prove useful. As to its sterility, only a prolonged experience can enable anyone to speak with certainty on this point, but it appears to be prepared very carefully, though we have not been informed as to what is the exact method of preparation employed.

## A WARNING TO DOCTORS' WIVES.

*To the Editors of* THE LANCET.

SIRS,—There is a woman applying for a situation as cook-general at doctors' houses. She has for some years past given my wife's name as a reference. In each case she assumes a different name. Her object is to obtain her fare and often a meal. She has never been in my service. Should anyone wish to prosecute her it might be advisable to detain her and communicate with me by telephone.

I am, Sirs, yours faithfully,

E. W. CROSS.

Leytonstone, Essex. Telephone, 546 Wanstead.

## AN APPEAL.

Dr. Stenson Hooker, 36A, New Cavendish-street, London, W., writes: "May I crave a small space in THE LANCET for a very urgent and deserving case? A highly respectable widow of a medical man has, through illness and other causes, been lately unable to meet her modest expenditure. She is most anxious to keep up her little home by taking a resident patient or 'paying guest,' and if any of your kind readers would send her a patient or visitor she would be most grateful. She is a most conscientious woman, a trained and very intelligent nurse, and anyone sent to her would be thoroughly well looked after. Her home is situated on high ground just outside Hastings, a bracing and healthy spot, and I shall be happy to communicate her address to medical correspondents."

*Dr. J. S. Pitt-Taylor.*—The samples of white and black grape must were taken from the press after fermentation had commenced, as evidenced, of course, by the presence of alcohol; the musts were sterilised by the addition of an antiseptic in order to check fermentation until they could be submitted to analysis. It is scarcely possible to find commercial specimens of grape juice absolutely free from alcohol.

*Carcinoma.*—Our correspondent is invited to confide his name and address to us so that his interesting note may be replied to.

*Dr. J. W. Dalgliesh.*—The following figures are taken from an analysis given in THE LANCET of Oct. 29th, 1898, p. 1139, of an amontillado sherry. Total solid matters, 2·20 per cent.; sugar, 0·21 per cent.; tartaric acid, 0·34 per cent.; acetic acid, 0·12 per cent.; potassium sulphate, 0·52 per cent.; and alcohol by volume, 18·25 per cent. The wine has been fortified by the addition of approximately 5 per cent. by volume of spirit. There are excellent amontillados, however, on the market which contain decidedly less alcohol than this.

**COMMUNICATIONS not noticed in our present issue will receive attention in our next.**

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

**TUESDAY** (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

**WEDNESDAY** (25th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30). P.M.

**THURSDAY** (26th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

**FRIDAY** (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golder-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

**SATURDAY** (28th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

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*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Dec. 19th, 1907.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rainfall. | Solar Radio in Vacuo. | Maximum Temp. Shade. | Min. Temp. | Wet Bulb. | Dry Bulb. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Dec. 13 | 29·48 | W. | 0·58 | 64 | 51 | 39 | 39 | 40 | Cloudy |
| ,, 14 | 28·77 | W. | 0·45 | 48 | 45 | 40 | 38 | 42 | Cloudy |
| ,, 15 | 29·77 | S.W. | ... | 49 | 42 | 36 | 35 | 36 | Fine |
| ,, 16 | 30·22 | S.E. | ... | 63 | 46 | 35 | 38 | 38 | Foggy |
| ,, 17 | 30 32 | S. | ... | 54 | 46 | 38 | 39 | 40 | Fine |
| ,, 18 | 30·13 | S.W. | ... | 55 | 53 | 40 | 44 | 45 | Overcast |
| ,, 19 | 29 96 | S.W. | 0·01 | 56 | 55 | 44 | 52 | 53 | Overcast |

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